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Workplace AI in China

The changing profile of work and labour

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Summary

- Artificial intelligence (AI) integration in China's workplaces is largely driven by market forces and competition, favouring business interests over those of workers. As a result, the balance of power in workplaces is shifting further towards employers who control data and algorithms, which leaves workers with reduced bargaining power and increased vulnerability to exploitation.
- Despite AI's role in enhancing efficiency in the workplace, it has not led to improved job quality for Chinese workers. AI solutions tend to be designed for maximizing labour extraction, both paid and unpaid, often leading to worse working conditions and job insecurity.
- Chinese workers report higher workloads and stress due to AI tools. The pressure to meet both human supervisors' expectations and algorithmic metrics often translates into extended hours and more intense work to secure high performance ratings that can impact the long-term prospects of employees.
- The rapid introduction of AI in Chinese workplaces has outpaced the ability of workers to adapt, pressuring them to quickly learn new skills and putting those unable to keep up at risk of losing their jobs.
- Smaller and less competitive Chinese firms in lower value-added sectors, such as those in component manufacturing or raw materials processing, often use AI solutions more aggressively in workforce management due to narrower profit margins, which disproportionately affects low-skilled jobs.
- The varying AI capacities of firms is polarizing labour practices in global value chains. With the introduction of AI, workers in the Global South face higher risks of exploitation because firms with resource constraints and competition pressure are less incentivized and lack the capacity to use AI effectively and ethically.

01 Introduction

The rapid introduction of AI tools in the workplace has created new challenges for workers in China. While these technologies promise much, so far, they have had numerous detrimental impacts for employees.

Innovation and the mass deployment of artificial intelligence (AI) promise an easier, more productive work life where people are freed from repetitive duties to focus on more innovative tasks. The rise of powerful AI solutions is also rewriting the rules of work and labour relations, the effect of which will become more pronounced in the coming decade.

Much of the current attention around AI's impact on work focuses on the potential for job losses. Yet, despite increased interest, there is limited research into how employees are affected by workplace AI. From retail to investment banking, emerging technologies are already drastically reshaping the nature of work.[1] Throughout a candidate's working life, AI-enabled tools (see Chapter 3) are transforming the everyday experiences of employees, affecting their autonomy, rights, benefits and, most importantly, their relative power to employers.

This research paper explores these changes in China, a country of 1.4 billion people that is rapidly integrating AI into everything from public services to business operations and is increasingly leading on global standards in the field.[2] This paper demonstrates how AI is being deployed in real-world workplaces in China and how workers respond to it. A key finding is that the enhanced efficiency achieved through AI has not translated into better quality jobs for Chinese workers. Instead, the AI solutions are often designed to facilitate employers' extraction of both paid and unpaid labour, leading to deteriorating conditions and increased job insecurity for workers – quite the opposite of what is often promised.[3]

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1 Partridge, J. et al. (2023), 'From retail to transport: how AI is changing every corner of the economy', *Guardian*, 18 February 2023, https://www.theguardian.com/technology/2023/feb/18/from-retail-to-transport-how-ai-is-changing-every-corner-of-the-economy.
2 Cheng, J. and Zeng, J. (2023), 'Shaping AI's Future? China in Global AI Governance', *Journal of Contemporary China*, 32(143), pp. 794–810, https://doi.org/10.1080/10670564.2022.2107391.
3 AI solutions cover both services and products, including natural language processing tools used in chatbots, voice assistants, algorithmic recommendation systems, content creating tools and analytical tools that predict future events based on historical data.

The research adopts a qualitative approach to better understand the nuances of how AI solutions are being used in detailed work processes and how they affect people's work experience. The insights were drawn from more than 50 interviews during a two-month period of fieldwork in Shenzhen and Beijing in early 2023. Interviewees include company executives, software developers, customer-facing workers, human resource professionals, scholars and lawyers in China. The author scheduled interviews with a small group of initial participants from her existing network, and then identified new interview subjects through the references of those interviewed. Data were gathered both through formal interviews as well as in casual settings, such as conversations over meals and during taxi journeys. The author asked a set of structured questions with follow-ups based on the respective roles of interviewees.[4] In order to understand common design features and intended objectives of AI tools, the author undertook a review of over 20 products used by Chinese employers. The information was obtained through official product websites and posts on their social media accounts. The author also posed as a potential customer to obtain further information through message exchanges with sales representatives.[5]

While the enhanced capacity of AI to carry out complex human tasks could lead to increased job losses, this research paper focuses on how AI tools affect the experience of workers and their job quality, with the aim of providing a more nuanced and human-centric perspective beyond economics. The research also looks to bridge a knowledge gap in AI and labour studies, by offering fresh evidence from China, which remains largely inaccessible to researchers from overseas organizations.

To investigate the implementation of AI solutions in key employment processes, the research used an analytical framework that focused on the shift of power between business owners and workers. This approach takes into account a well-recognized understanding in labour studies that workers face greater risk of exploitation and discrimination when they have weaker bargaining power compared to their bosses.[6] The research is based on the assumption that workers will be at greater risk of exploitation if AI further amplifies the existing power imbalance between employers and employees.

China's AI roll-out offers a compelling opportunity to study this technology's impact in the workplace due to the country's unique socio-economic environment. The combination of rapid AI development, cutthroat competition, strong state support, and weak labour and privacy safeguards has led to more aggressive and faster AI adoption in China's workplaces compared to the West. China's wide range of industries, from big tech companies like Alibaba and Tencent to small village

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4 Questions covered experiences of working with AI (workers); how AI solutions are deployed (company executives and HR professionals); and the legal and ethical considerations for deploying AI for work (lawyers and scholars).
5 The author approached the AI solution providers posing as a potential customer through official online customer chat boxes. This enabled the author to ask questions about specific functionalities relevant to the research, such as what personal data are collected and how are they processed through AI to achieve business goals.
6 Paul, C. S. (2018), *The architecture of digital labour platforms: Policy recommendations on platform design for worker well-being*, ILO future of work research paper series, 3, Geneva: International Labour Organization, http://www.ilo.org/global/topics/future-of-work/publications/research-papers/WCMS_630603/lang--en/index.htm.

factories, shows the varied risks workers face across different parts of industry value chains. This provides valuable lessons for policymakers from countries at different stages of economic development to create their own AI policies.

The paper aims to contribute to global policies by identifying problematic practices and potential pitfalls in China's recent application of AI in work settings. However, the paper does not aim to comprehensively evaluate the effectiveness and accuracy of AI solutions, map the specific technologies applied, or compare practices between China and other countries. These are all promising directions for further investigation.

A key takeaway from the study is that the contexts in which AI is deployed are as important as the technology itself. When AI adoption is solely motivated by market forces, such as supply and demand, it can leave workers extremely vulnerable. Without proper checks and balances, AI solutions tend to be skewed in favour of business interests rather than the well-being of workers. As a result, the balance of power further shifts to employers due to their exclusive control over data and algorithms, whereas workers suffer diminishing bargaining leverage and become increasingly prone to manipulation and exploitation in both their professional and personal lives.

While China has a unique political economy, there are many shared concerns among workers around the world as powerful AI tools sweep into workplaces. To protect employees from exploitation in this new context, it is essential to address the root causes of the growing power imbalance between workers and business owners with a more holistic approach. This requires engagement of stakeholders and experts across disciplines as well as innovative efforts that go beyond the narrow scope of AI governance to areas such as market competition practices, labour rights protection, and reforms in education and skill training.

02
Workplace AI in China and beyond

China's political economy has enabled the rapid development of workplace AI tools. This chapter explores the particular factors that have allowed this accelerated progress.

China offers a useful window into the latest applications of AI in the workplace. While trailing behind the US in core advances in AI research, China's strength lies in its ability to turn emerging technologies into practical applications quickly and cost-effectively to advance real-world progress for businesses.[7] The country is home to over 4,300 AI firms, second only to the US, with the majority focusing on commercial applications.[8]

Workplace AI is rapidly expanding, with a surge of new products and services launching in the Chinese market due to the reduced costs of developing and deploying AI systems in recent years.[9] The workplace AI landscape in China is fiercely competitive, featuring a blend of offerings from both established domestic tech giants and burgeoning AI startups. The major players in this arena are largely the dominant domestic frontrunners of the early internet era, including e-commerce platform Alibaba, search engine Baidu, gaming company Tencent, and TikTok's parent company ByteDance. They are also developers of the most widely used collaborative AI work platforms in China including DingTalk, Feishu and WeCom. Their dominance is largely due to their extensive resources and capabilities, which allow these companies to develop sophisticated AI models – a process that demands considerable capital and expertise. Key technologies that feature in their products include natural language processing (NLP), robotic process automation (RPA), speech recognition, computer vision (enabling programmes to derive information

7 Lee, K.-F. (2018), *AI superpowers: China, Silicon Valley, and the new world order*, Boston: Houghton Mifflin Harcourt.
8 Xinhua (2023), 'Xinhua Headlines: AI revolution reshaping China's economy', 8 July 2023, https://english.news.cn/20230708/6ac38f70dbe24856a8c7f2947cdb0664/c.html.
9 Reilly, J. (2023), 'A cost breakdown of artificial intelligence in 2023', Akkio, https://www.akkio.com/post/a-cost-breakdown-of-artificial-intelligence-in-2023 (accessed 20 Oct. 2023).

from image and videos), recommendation systems and predictive analytics. Nevertheless, there is a growing presence of smaller firms in the market. These typically utilize less complex, open-source AI models to offer basic and straightforward functionalities at lower costs, which often leads to some of the most visible exploitation of workers.

The latest progress in large AI models, underscored by ChatGPT's success, is driving a significant rise of investment in AI solutions for work in China.

The latest progress in large AI models, underscored by ChatGPT's success, is driving a significant rise of investment in AI solutions for work in China.[10] While the OpenAI service is not available in China, in August 2023, Beijing approved its first batch of home-grown generative AI services for public use, including ChatGPT-like chatbots launched by tech firms Baidu and SenseTime.[11]

China's rapid adoption of AI for commercial applications in workplaces is underpinned by its political economy, placing the country in a notably advantageous position compared to the rest of the world – with limited regulation and privacy laws, high levels of competition and state support.

Data abundance and lax laws

China boasts a wealth of varied personal data, which firms can access and utilize for AI development. The quality and size of datasets are crucial to the training of AI algorithms and the accuracy of the predictions that the systems make. China's workforce, consisting of a staggering 782 million people, offers a vast reservoir of data.[12] With 540 million employees conducting all or portions of their work through online platforms, a significant amount of this data is already in digital formats.[13] The widespread use of smartphones, wearable technology and other monitoring devices, further facilitates the extensive data collection from workers' day-to-day activities – beyond the traditional workplaces.

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10 Zhou, C. (2023), 'AI frenzy sweeps China as companies search for their own ChatGPT', Nikkei Asia, 2 June 2023, https://asia.nikkei.com/Business/Business-Spotlight/AI-frenzy-sweeps-China-as-companies-search-for-their-own-ChatGPT.
11 Bloomberg (2023), 'Baidu, SenseTime Among First Firms to Win China AI Approval', 30 August 2023, https://www.bloomberg.com/news/articles/2023-08-30/baidu-among-first-firms-to-win-china-approval-for-ai-models; for more information about Chinese AI applications, see Ding, J. and Xiao, J. W. (2023), *Recent Trends in China's Large Language Model Landscape*, Centre for the Governance of AI, https://cdn.governance.ai/Trends_in_Chinas_LLMs.pdf.
12 World Bank Open Data (2023), 'Labor force, total – China', https://data.worldbank.org/indicator/SL.TLF.TOTL.IN?locations=CN.
13 China Internet Network Information Center (CNNIC) (2023), *The 51st Statistical Report on China's Internet Development*, https://www.cnnic.com.cn/IDR/ReportDownloads/202307/P020230829505026163347.pdf.

Compared to strict regulations in the West, China's legal protections on privacy remain relatively lax, despite recent updates to strengthen data protection rules.[14] As a result, Chinese workers may be less likely to take legal action against extensive personal data collection practices at workplaces, especially as many perceive that their data are already being collected and analysed by the state and corporations for commercial and public service purposes.[15] Compared to citizens of other Asia Pacific nations, Chinese workers are among the most willing to trade privacy for safety and convenience.[16] This mix of lenient regulations and greater public tolerance allows Chinese firms to collect and utilize user data whenever possible and for whatever purpose they see fit.

Market competition

AI solutions are viewed as an effective tool for businesses to outperform rivals in China's fiercely competitive commercial environment.[17] Firms operate on thin margins and their survival is dependent on careful allocation of limited resources. The perception of AI as a shortcut to business success is alluring. Indeed, the rise of gig economy platforms – core to China's booming digital economy – demonstrates the power of AI in managing a large and geographically dispersed workforce. From hiring to firing, AI promises greater cost-efficiency at every stage of employment. These are critical considerations for Chinese companies looking to scale rapidly without a proportionate increase in human resource costs.

State support

China has a highly centralized economic planning system that can quickly shift resources to strategic areas to support the political agenda of the country's leadership.[18] Currently, China has high hopes that AI will bolster its slowing economy and increase its international influence, therefore it has created an AI-friendly policy environment for firms to explore ways to implement the technology.[19] Furthermore, China is experiencing a demographic shift, with fears that it could soon face a labour shortage as its population ages.[20] The ambition is that AI will help China escape the

14 Fang, S. and Liang, H. (2022), 'China's emerging data protection laws bring challenges for conducting investigations in China', 24 July 2022, DLA Piper, https://www.dlapiper.com/en/insights/publications/2022/07/chinas-emerging-data-protection-laws-bring-challenges-for-conducting-investigations-in-china.
15 Interviewees noted that they used apps from ride-hailing to online shopping during their day-to-day life – all apps require the extensive collection of personal data including facial recognition information, home addresses, identification numbers and bank details.
16 Qian, Z. C. (2018), 'Chinese Consumers Most Willing to Trade Privacy for Convenience', 15 June 2018, Sixthtone, https://www.sixthtone.com/news/1002467.
17 Yu, E. (2023), 'China is ramping up efforts to drive AI development', 19 May 2023, ZDNET, https://www.zdnet.com/article/china-is-ramping-up-efforts-to-drive-ai-development.
18 Bradford, A. (2023), 'The Chinese State-Driven Regulatory Model', in *Digital Empires: The Global Battle to Regulate Technology*, New York; Oxford Academic, https://doi.org/10.1093/oso/9780197649268.003.0003.
19 Roberts, H. et al. (2021), 'The Chinese approach to artificial intelligence: an analysis of policy, ethics, and regulation', *AI & Society*, 36(1), pp. 59–77, https://doi.org/10.1007/s00146-020-00992-2.
20 Fadanelli, J. (2022), 'China's Demographic Trends in the Context of Economic Competition', 18 August 2022, Center for Strategic and International Studies, https://www.csis.org/blogs/new-perspectives-asia/chinas-demographic-trends-context-economic-competition.

middle-income trap[21] and continue to prosper beyond its 'world factory' era, which was largely powered by the abundance of cheap labour.

Much like the relaxed regulatory environment in place during the initial expansion of internet giants like Alibaba and Tencent, firms developing and utilizing AI have been given substantial leeway to explore how to harness new technologies for improved productivity without having to worry too much about legal repercussions. Yet, Beijing has recently intensified its regulatory measures on the implementation of high-stake generative AI models, such as those that power ChatGPT, recognizing that such services could pose risks to the government's political control.[22] Further research is needed to discern how and where Beijing chooses to draw the line between political risks and economic growth regarding AI development.

The speed at which a new AI product can be launched to market is much faster due to competitive pressure and the lack of rigid regulatory oversight.

Due to China's political economy, the adoption of AI solutions in the country's workplaces significantly differs from the West. The speed at which a new AI product can be launched to market is much faster due to competitive pressure and the lack of rigid regulatory oversight. Personal data collection and the profiling of workers can be more aggressive due to the absence of independent worker unions and loose labour laws. While China has been keen to develop new laws to govern AI and its algorithms, the focus of recent regulations has been on information control, consumer rights and the anti-competitive practices of big tech companies.[23] Therefore, the power imbalance between workers and employers remains embedded in China.

However, public concerns have been escalating over AI's role in fostering exploitative conditions for gig economy workers in China. For example, the efforts of academics and journalists to expose the challenging conditions faced by delivery drivers under algorithmic management sparked widespread public outrage, leading to the incorporation of protections for workers in the algorithmic recommendation regulations enacted in 2022.[24]

Chinese workers are experiencing rapid changes during their day-to-day work as AI becomes more prominent in the workplace. While many enjoy the benefit of AI taking on some of the tedious and repetitive tasks, they also find themselves

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21 When a country becomes less competitive in exporting manufactured goods due to rising wages but is unable to compete with more developed economies in the high-value-added market.
22 Recent measures to regulate generative AI providers emphasized the 'adherence to the values of socialism and the prohibition of generating incitement against the State'. Translation available at Digi China (2023), 'Translation: Measures for the Management of Generative Artificial Intelligence Services (Draft for Comment) – April 2023', https://digichina.stanford.edu/work/translation-measures-for-the-management-of-generative-artificial-intelligence-services-draft-for-comment-april-2023.
23 Sheehan, M. (2023), 'China's AI Regulations and How They Get Made', Carnegie Endowment for International Peace, https://carnegieendowment.org/2023/07/10/china-s-ai-regulations-and-how-they-get-made-pub-90117.
24 China Law Translate (2022), 'Provisions on the Management of Algorithmic Recommendations in Internet Information Services', https://www.chinalawtranslate.com/en/algorithms.

having to quickly adapt to new ways of working, where AI is a competitor, an assistant and, increasingly, a boss. Workers are not only concerned about AI potentially taking over their jobs, they are also concerned that one day they will be fired by AI based on its assessment of their productivity and value to the firm.

Worldwide phenomenon

Such experiences are not exclusive to Chinese workers as AI tools are sweeping into workplaces worldwide. AI is now woven deeply into the fabric of our daily lives and work routines. This technology contributes to the exponential growth of the gig economy and flexible working – a trend well underway even before the COVID-19 pandemic. From ride-hailing to cleaning, food delivery and home-sharing, AI powers digital platforms that link hundreds of millions of freelancers with customers for short-term jobs and contractual work.[25] In the UK, three out of every 20 adults secured work via AI-powered platforms at least once a week in 2021, compared to one in 20 in 2016.[26] A growing body of work from Western scholars and the media has started to examine the algorithmic management and surveillance experienced by workers on big tech platforms such as Amazon and Uber.[27]

While previous progress on automation and robotics predominantly affected workers in low-skilled roles, those in high-skilled professions and the creative sectors are now increasingly feeling AI's presence. Leveraging AI's ability to analyse and predict outcomes from vast datasets, well beyond human capabilities, businesses are utilizing AI to accelerate decision-making, optimize resources, engage customers and identify new opportunities, although the effectiveness of its functionality is sometimes debated. Workers are also using AI solutions to facilitate work. ChatGPT, a chatbot developed by Microsoft's OpenAI, accumulated 100 million users globally within mere months of its launch. A 2023 survey shows that 10.8 per cent of employees of worldwide companies surveyed have tried using ChatGPT in the workplace at least once as of June 2023, up from 5.5 per cent in February of the same year.[28] The huge potential of large AI models to enhance productivity has already prompted executives to re-evaluate their investment strategies and recruitment plans.[29]

The rapid progress of AI technology and its implementation in workplaces presents new challenges for workers in China and around the world. The following chapter explores these challenges through real-world examples of AI adoption in workplaces and the experiences of workers involved.

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25 Kässi, O., Lehdonvirta, V. and Stephany, F. (2021), 'How Many Online Workers are there in the World? A Data-Driven Assessment', https://open-research-europe.ec.europa.eu/articles/1-53.
26 Trades Union Congress (TUC) (2021), 'Gig economy workforce in England and Wales has almost tripled in last five years – new TUC research', 5 November 2021, https://www.tuc.org.uk/news/gig-economy-workforce-england-and-wales-has-almost-tripled-last-five-years-new-tuc-research.
27 Dawood, S. (2023), 'Amazon's worker surveillance "leads to extreme stress and anxiety"', *New Statesman*, 13 February 2023, https://www.newstatesman.com/spotlight/tech-regulation/cybersecurity/2023/02/amazon-workers-staff-surveillance-extreme-stress-anxiety.
28 Statista data (2023), 'Global employees attempting to use ChatGPT at work 2023', https://www.statista.com/statistics/1378709/global-employees-chatgpt-se.
29 Statista data (2023), 'Gig economy projected gross volume 2018–2023', https://www.statista.com/statistics/1034564/gig-economy-projected-gross-volume.

03
From hiring to firing

AI solutions are used in key employment processes in China, but their deployment has further warped the balance of power between employer and employee.

AI permeates every step of the employment journey in China, from the time a candidate submits their application to their last day at work. A review for this research paper of more than 20 AI tools used in the employment process in China shows that, unlike ChatGPT – which is powered by advanced, large-scale models from leading research laboratories – the AI solutions employed by Chinese companies are tailored for specific tasks and are powered by smaller-scale models. These tools are predominantly developed by domestic firms. While China has approved some large-language-model products, such as Baidu's Ernie and Tencent's Hunyuan, these are still behind their Western counterparts, such as ChatGPT, in terms of technical prowess.[30] The primary design goal of most popular AI employment tools in China centres around boosting productivity and reducing costs, which is realized through four processes.

- **Workflow automation:** This refers to a process of automating repetitive and manual tasks. Common functions include automatic information filling, data extraction from images, videos, audio and documents, as well as task assignment powered by algorithms.
- **Datafication:** This process involves transforming various aspects of work activities and worker behaviour into quantifiable data for further analysis. It allows a thorough evaluation of detailed work and enhances the visibility and traceability of work processes.

30 McMorrow, R. et al. (2023), 'China plays catch-up to ChatGPT as hype builds around AI', *Financial Times*, 20 February 2023, https://www.ft.com/content/a4f6c01e-403f-4d43-9c6a-713d49771a4d.

— **Big data analytics:** AI-backed systems distinguish themselves from traditional digital technologies by generating human-like insights rather than just collecting raw data. They can score workers, flag potential issues, identify trends, and make predictions and recommendations.

— **Platformization:** Data are often collected and shared across various devices, networks and platforms associated with workers, facilitating a more comprehensive – and intrusive – profiling of employees.

Table 1 below details the popular tools used through key employment processes in China. The author examined over 20 AI tools in four categories – recruitment, management, evaluation and personnel changes – focusing on their stated functionalities and use cases. Table 1 aims to identify areas in which workers interact with AI and the potential implications for prospective, hired and outgoing individual workers. It should be noted that the paper does not aim to provide an in-depth evaluation of the effectiveness or accuracy of AI tools in performing their functions.

Table 1. AI uses in the workplace

	Recruitment	Management	Evaluation	Personnel changes
Application	• Job posting • Candidate matching • CV sorting • Meeting scheduling • AI video interview • Background investigation	• Algorithmic task management • Collaborative work platforms • Messaging apps	• Online activity monitoring • People analytics • Wearable devices • Surveillance cameras	• Business analytics • HR management tools
Use cases	• Mass recruitment for seasonal workers • Campus recruitment • Entry-level position recruitment	• Platform work • Office work	• Promotion/demotion • Pay rise/pay cut • Employee training	• Dismissal • Internal transfer • Labour arbitration • Court hearing
Purpose	• Speed up process • Save costs • Expand talent pool	• Optimize resources • Improve efficiency • Enhance visibility and traceability	• Discipline workers • Improve productivity • Retain talent	• Optimize resources • Cost saving

Source: Compiled by the author.

Recruitment

AI-enabled tools are proliferating across all stages of recruitment in China, from posting a job ad, matching candidates and screening CVs, to arranging and conducting interviews and onboarding. AI offers a tool for efficiently recruiting and organizing the workforce, which is crucial to the competitiveness of firms when their business model relies on slim profit margins.

In Shanghai, 91.58 per cent of companies that took part in a 2023 survey on the use of AI in human resources stated that they used AI-enabled software or services to varying degrees during recruitment processes.[31] Nationwide, large employers (those with more than 1,000 employees) that deal with high volumes of job applicants are the primary users, with one-third of such companies using AI tools for recruitment.[32]

While many firms are aware of the potential pitfalls and ethical concerns associated with the use of AI in hiring processes, the clear benefits and the fast-paced competition for recruits outweigh these concerns.

The survey research found that AI tools are widely used in campus recruitment for fresh graduates and mass-hiring for seasonal workers in manufacturing and service sectors. However, more senior roles and knowledge-intensive positions, such as lawyers or business consultants, tend to continue to rely on traditional recruitment channels, such as headhunting and internal referrals.

Campus recruitment

According to interviews with HR professionals and job seekers in China, the job-hunting journey for a typical Chinese graduate often starts with browsing job ads online that are recommended by AI algorithms based on the seeker's profile, preferences and search history. Once a suitable role is identified, the graduate submits a CV and cover letter through the company's online application portal, or through third-party platforms that are often linked to the candidate's social media accounts such as WeChat. The application is then directly assessed by an AI system that evaluates the applicant's qualifications based on specific criteria set by the company. If shortlisted, the person may be informed and contacted by an AI agent with a synthetic human-like voice to arrange an AI video interview based on their availability.

Table 2. A typical job application process involving AI for new Chinese graduates

1. Browsing job ads	Recommended by AI
2. Submitting CV	Assessed and selected by AI
3. Scheduling	AI generates messages for next steps
4. Interview	AI analyses and scores performance
5. Decision	Human interviewers refer to AI-generated reports
6. Q&A	AI chatbot available 24/7 for questions

Source: Compiled by the author.

31 Wang, Z. G. et al. (2023), 'Research on the Transformation of Artificial Intelligence to Human Resource Management', *Advances in Social Sciences*, 12(2), pp. 827–832, https://doi.org/10.12677/ASS.2023.122115.
32 Pu, J. (2023), 'Legal Regulation of Intelligent Recruitment Discrimination in the Context of Algorithms', *Open Journal of Legal Science*, 11(2), pp. 320–328, https://doi.org/10.12677/OJLS.2023.112046.

During the video interview, AI (some appear in the form of an avatar) captures and analyses candidates' answers and other features including the slightest movements in facial expression and body gestures. A detailed report will be generated that will help determine whether the candidate progresses to the next round. Human interviewers are typically involved from the second round of interviews and make the final decision on successful candidates. Some companies employ AI to tailor training materials and programmes based on the profiles of candidates during onboarding.

Mass recruitment

AI has proven useful in the mass recruitment of candidates for low-skilled jobs, such as call centre operators, assembly line workers and delivery riders. Unlike the competitive professional jobs where one is picked out of many applicants, firms that are mass hiring low-skilled roles filter out a small number of candidates who fail to meet basic qualifications and proceed to hire the rest. In China, job seekers of such roles are often asked to upload images and videos of themselves via smartphone applications. AI is used to conduct analysis and generate scores and recommendations based on the specific requirements of the roles and employers. For example, the candidate's ability to speak standard Mandarin will be tested for customer service roles through an AI speech recognition system. Physical dexterity will be evaluated for factory jobs by analysing candidates' movements in video footage. For client-facing roles, AI is used to score a candidate's appearance, such as if they have scars on their face or tattoos.

Background check

Beyond initial candidate selection, AI is also used to perform background checks on candidates. For example, ZMBeiDiao, a leading background check provider, uses facial recognition to verify the identity of job seekers against police databases and flag potential risks by examining information from their public and private records.[33] Highly sensitive personal information, such as credit and health records, are acquired and examined, according to sales materials from ZMBeiDiao and other background check providers.

Talent pool management

In addition, firms also use AI to build their own talent pool by leveraging data collected from past applicants and identifying potential candidates on third-party platforms. To facilitate communication with potential employers and increase their chances of securing a job, it is common for job seekers in China to allow potential employers to look at content on their personal WeChat and other social media accounts during job applications. WeChat is a one-stop platform providing services that cover almost every aspect of modern life in China, including messaging, payments, access to public services and short video streaming. The authority to view a candidate's social media account could give firms access to job seekers' contacts,

33 Product offerings of major background check companies can be found here: ZMBeiDiao (undated), 'Screenings and Pricing', https://www.zmbeidiao.com/en/product.html; iBeiDiao (undated), '背调项目介绍 [iBeiDiao programme introduction]', https://www.ibeidiao.com/bds.htm.

posts and other related personal information for profiling.[34] AI solution providers including Gllue and Talentlines promote their ability to identify potential candidates and track their career movements by scraping information from other aggregated job sites, such as Maimai, China's equivalent to LinkedIn.[35] An HR professional noted in an interview with Chinese media that they will get notifications when the targeted people update their profile on those platforms – a sign that they are potentially looking for new opportunities or career changes.[36]

Data security risks

The extensive personal data collected during the hiring process makes data security a growing concern. Many firms lack robust IT infrastructure to safeguard the wealth of personal data they collect and store, even if a candidate is unsuccessful. For instance, in 2019, a database of 33 million profiles of Chinese job seekers containing sensitive personal details such as an individual's username, age, home address, email address, phone number, marital status, job history and salary history was leaked.[37] Furthermore, an investigation conducted by state broadcaster CCTV in 2021 revealed that three major job sites – Zhaopin, Liepin and 51Job – had suffered data leaks, with some of the exposed information subsequently being sold to scammers.[38]

Perpetuating bias

AI promises to foster fairness in recruitment by reducing human bias. However, in China, where biases – particularly regarding gender and age – are deeply ingrained in the job market, AI often perpetuates these existing prejudices instead of mitigating them. For example, many job listings in China will specify preferred age ranges and gender, and women frequently face questions about their marital status.[39]

All recruitment systems that use AI reviewed in this research assess a candidate's suitability by using a variety of factors based on the preferences of employers – some of which are discriminatory. In some cases, personal information of candidates that is not necessarily relevant to the job can be evaluated. For example, some of the AI recruitment software reviewed for this paper claim that they can tell a job applicant's mental health status and tendency towards violence by making them answer questions and play games. Because these evaluations are algorithmic, they can be less transparent than human-led assessments, making it difficult for candidates to challenge potentially biased decisions.

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34 Research interview conducted with a senior product developer, under condition of anonymity, Beijing 2023.
35 Product offerings can be found: Gllue (undated), 'Gllue – The powerful ATS/CRM tailored for recruiters', https://www.gllue.com/headhunting-ats/; Talentlines (undated), '招聘管理系统和企业人力资源管理软件的集成解决方案 [Recruitment management system and enterprise human resource management software solution]', https://www.talentlines.com/pages/features.
36 36kr (2022), '大厂监控与员工隐私：消失的边界 [Corporate surveillance and employee privacy: disappearing boundaries', https://36kr.com/p/1644391844324228.
37 Abrams, L. (2019), 'Unsecured Database Exposed 33 Million Job Profiles in China', BleepingComputer, https://www.bleepingcomputer.com/news/security/unsecured-database-exposed-33-million-job-profiles-in-china.
38 Lu, H. Z. (2021), 'Zhaopin, Other Job Sites Look Into Data Leaks After China Consumer Rights Show', YiCai Global, https://www.yicaiglobal.com/news/zhaopin-other-job-sites-look-into-data-leaks-after-china-consumer-rights-show.
39 The common perception in Chinese society is that married women are less committed to work than unmarried women. There is also concern that recently married women or those married and without children will need to take maternity leave soon.

While Western societies have prevalent concerns about AI models inheriting social bias from flawed datasets, in China discrimination in many cases is intentionally introduced by tailoring AI models to match employers' preferences, which can amplify harms. Scholars interviewed for this research also share concerns that rigid AI-driven selection criteria could lead firms to overlook exceptional candidates whose qualities cannot be easily quantified and captured by algorithms, including interpersonal and communication skills. However, these potential pitfalls do not seem to overly concern Chinese firms. A team leader at a Chinese tech company articulated the utilitarian attitude of Chinese firms succinctly. The primary focus of the firm, they said, is not on capturing unique talents but ensuring that their recruitment methods can find people who are capable of performing the job effectively. 'We only need to make sure the one we select can do the job,' they said.[40]

Intensified competition and anxiety

While firms report greater efficiency in processing large volumes of applications and accessing a broader talent pool, workers have mixed feelings about their increased interaction with AI when job seeking. Several interviewees mentioned that AI reduces the amount of manual work during the application process but some fear that the convenience afforded by AI could intensify overall competition in the job market, as workers must compete with more candidates and meet higher standards.[41]

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Moreover, the ambiguity surrounding AI selection criteria adds to job seekers' stress. Many candidates invest additional time and effort to bolster their chances of clearing AI evaluations. On Zhihu, China's answer to Quora (a knowledge-sharing platform), users share advice on how to make a favourable impression on AI systems, in regard to appearance, eye contact, smiling, tone, the quality of microphones and webcams, and physical background. In the hope of impressing an AI system, a recent female graduate invested in an expensive skin treatment to reduce 'imperfections' and rigorously practised maintaining a smile.[42]

With many job seekers scrambling to navigate the intricacies of AI-driven recruitment, a burgeoning area dedicated to AI interview coaching has taken off in China. It offers an array of services: from tailoring CVs to be more AI-compatible

40 Research interview with a team leader of one of the largest Chinese tech companies, under the condition of anonymity, Shenzhen 2023.
41 Research interviews conducted with mostly office workers, under the condition of anonymity, Shenzhen and Beijing, 2023.
42 36Kr (2022), 'AI面试流行，求职者开始讨好算法 [Chinese job seekers start to please the algorithm for AI interviews]', https://www.36kr.com/p/2033406166116864.

to human coaching to achieve high scores in AI interviews. Job seekers can also pay for access to past AI interview questions and sample answers, as well as subscribe to mock AI interview systems to 'fine tune' their responses to get higher scores.[43]

Rather than being critical of AI-driven recruitment, Chinese job seekers are increasingly adapting to this new landscape, as evidenced by the rise of AI interview coaching services. This shift may unintentionally widen social inequality: individuals with more resources to access and adapt through these private coaching and training services gain a competitive edge in the job market, as such services are often out of reach for socio-economically disadvantaged groups.

Privacy invasion

While the invasion of privacy during background checks is not a new phenomenon in China, AI's unparalleled capacity to gather, analyse and process immense amounts of personal data has made these investigations more comprehensive and cost-effective than ever before, prompting employers to standardize such practices during the hiring process. One HR professional at a tech company said the thoroughness of background checks enabled by current AI tools has significantly weakened workers' positions in job negotiations.[44] While not all collected information is directly relevant to a given role, it can still be a deciding factor for employers when faced with a large pool of candidates. Moreover, these data can be leveraged against employees during their tenure, especially if conflicts arise with their employers.

Management

Securing a job is just the start of an employee's engagement with AI at work. From gig economy workers to white-collar professionals, AI is increasingly utilized by firms in China to manage the day-to-day activities of employees. This section examines two of the most widely used AI applications – algorithmic management and collaborative work systems – and their impacts. In both cases, employers have greater access and control of the tools. The mechanism behind AI systems is often not transparent to workers – exacerbating the pre-existing information asymmetries between employers and employees, which amplifies existing power imbalances. While AI holds the potential to enhance work management efficiency, it often prompts companies to intensify surveillance of their employees in order to feed data-dependent algorithms.

Algorithmic management

AI is central to the rise of Western gig economy platforms like Uber and DoorDash, in which firms use algorithms to allocate tasks to drivers, determine wages and evaluate performance with little human interference. In China, AI is used by platforms such as Didi for ride-hailing and Meituan for food delivery,

43 For an example of available training courses for AI interviews, see, Smartmian (undated), '课程中心 [Lesson centre]', https://www.smartmian.com/course?p=1&c=74.
44 Research interview conducted with a senior HR manager at a tech company, under condition of anonymity, Shenzhen 2023.

which automatically assign tasks based on a worker's service history, their loyalty to the platform, customer review scores and their real-time location data.[45] AI also helps to standardize and optimize services by providing detailed work instructions and real-time feedback on execution.

Collaborative work

Much like the pivotal roles that platforms such as Google Workspace and Microsoft Teams play in contemporary office work, Chinese companies are similarly leveraging homegrown collaborative work systems to set targets, track work progress, monitor employee activities and allocate tasks based on AI big data analysis.

Alibaba's DingTalk, ByteDance's Feishu and Tencent's WeCom – with a combined total of over 300 million monthly active users as of February 2024 – offer a broad range of services, from employee check-ins, circulation of internal announcements and instant messaging, to project tracking, document sharing, video conferencing and administrative approvals.[46] The companies also operate some of China's largest social media and e-commerce platforms. For example, Alibaba is the owner of shopping site Taobao, Bytedance is the parent company of short-video platforms Douyin and TikTok, and Tencent owns messaging app WeChat. The firms utilize data to train algorithms and generate insights for decision-making. Those in management-level roles are typically given greater access to data within these systems.

Reduced autonomy

Greater workflow efficiency through AI comes at the cost of worker autonomy. Both gig economy workers and white-collar professionals find themselves working longer hours at higher intensity in a relentless pursuit of ever-higher goals set by self-learning algorithms.

Research found that food delivery workers in China lost control over their work hours because algorithms dictate when and how orders are dispatched. In order to make a sufficient living, delivery workers, most of whom use motorbikes or mopeds, must be on standby waiting for orders and prepared to work at any time. The platforms also keep shortening the allocated time for delivery as the algorithms take into account the data generated by the fastest riders, who were often only able to achieve this by breaking traffic rules. As a result, all delivery workers are forced to meet the new target times to keep getting orders, leading to a dramatic spike in the number of traffic accidents because, for example, riders took illegal shortcuts or rode on the wrong side of the road to save time. [47]

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45 Chen, J. Y. (2018), 'Thrown under the bus and outrunning it! The logic of Didi and taxi drivers' labour and activism in the on-demand economy', *New Media & Society*, 20(8), pp. 2691–2711, https://doi.org/10.1177/1461444817729149; Sun, P. (2019), 'Your order, their labor: An exploration of algorithms and laboring on food delivery platforms in China', *Chinese Journal of Communication*, 12(3), pp. 308–323, https://doi.org/10.1080/17544750.2019.1583676.
46 Statista data (2024), 'Number of monthly active users (MAU) of the leading business apps in China as of February 2024', https://www.statista.com/statistics/1211801/china-leading-business-apps-based-on-monthly-active-users.
47 Sun (2019), 'Your order, their labor: An exploration of algorithms and laboring on food delivery platforms in China'.

Several drivers for ride-hailing apps interviewed for this research paper also mentioned that they cannot realistically refuse orders assigned by the system, as it would negatively impact their performance scores, which would then affect the future orders they get and their remuneration. Bad reviews, diversion from scheduled routes, driving mistakes and inactivity can indeed all result in lower scores and income. Some drivers have to switch to different platforms when their scores are insufficient to secure good orders.

Enforced discipline

AI serves as a mechanism to enforce employee discipline. Irregularities detected by AI can result in workers being barred from accessing their accounts, essentially preventing them from securing jobs through a platform. Ride-hailing app drivers in China suffer account suspensions due to reasons such as incomplete personal information, reckless driving or a mismatch in driver identities.[48]

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In many cases, however, decisions made by AI can be incorrect and controversial. In one instance, a female Didi driver was suspended because the system mistakenly assumed that the car was driven by a man due to her low-pitched voice.[49] In another incident, a driver lost access to his user account when the audio monitoring system installed in the vehicle detected the phrase 'tiao lou' – referring to committing suicide by jumping from a building – during a conversation with a passenger, prompting the AI to flag it as a safety risk without considering the context.[50]

Such AI intervention is possible thanks to the mandatory surveillance devices installed in vehicles, which are responsible for collecting data that are subsequently processed and utilized by AI systems. While major ride-sharing apps maintain that these practices enhance passenger safety, many drivers confess that they feel a strain at work due to this constant monitoring. 'It's better not to talk to passengers', one driver said.[51] While gig economy platforms promote greater freedom and flexibility to attract freelancers, in reality, workers face limited autonomy under the oversight of AI.

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48 Research interviews conducted with drivers on ride-hailing platforms during their lunch breaks and journeys in their cars, Shenzhen, 2023.
49 Sohu (2021), '滴滴女司机账号被封，记者介入调查，女司机：没办法，常遇到 [Reporters investigate the blocking of Didi female driver's account]', 13 May 2021, https://www.sohu.com/a/466121404_121069505.
50 Tencent News (2019), '滴滴的语音监控究竟有多严格？司机说了两个字就惨遭封号 [How strict is Didi's voice monitoring? A driver was banned just for saying two words]', https://cloud.tencent.com/developer/news/379915.
51 Research interviews conducted with drivers on ride-hailing platforms during their lunch breaks and journeys in their cars, Shenzhen, 2023.

Increased anxiety and stress

For office employees who typically work behind computer screens, AI-enabled work collaboration systems have become a major source of stress. An interviewee employed at one of the big tech companies in China said they face heightened pressure to maintain their online appearance and respond to messages quickly, which could be attributed to the increased visibility and trackability of work activities through AI tools. For example, platforms like DingTalk and Feishu identify members who have not read group messages and have a function to auto-call them if they do not respond to messages within a set time frame. Workers also receive automatic calls to keep them on their toes when there are updates related to their projects. Furthermore, AI can also identify employees' 'idle' hours and make assignment recommendations to their line managers. If workers finish a project early or a meeting gets cancelled, they often end up being assigned new tasks to occupy their availability thanks to AI.

In China, more advanced collaborative work systems have evolved into an all-encompassing platform that goes beyond the boundaries of traditional work. For instance, a tech worker in Shenzhen recounted being questioned by their supervisor about a taxi ride booked via a work app after a late shift. The journey was flagged by AI because the fare that day was inconsistent with the employee's average expenses and the destination was different from previous days. Through the often-compulsory work app installed on staff mobile devices, firms also track the real-time location of field workers, such as sales representatives and technicians, so managers can check if the workers arrive at designated places on time.[52]

Some firms have gone beyond monitoring physical and online activities of employees to using AI to gauge and manage workers' emotional states. A Chinese subsidiary of the Japanese camera maker Canon deploys a workspace management system that only allows smiling employees to enter the office and book conference rooms. Using so-called 'smile recognition' technology, Canon said the system was intended to bring more cheerfulness to the office in the post-pandemic era. 'Mostly, people are just too shy to smile, but once they get used to smiles in the office, they just keep smiling without the system which creates a positive and lively atmosphere,' a spokesperson told Nikkei Asia.[53]

Platform operators, sitting in positions of authority, can alter rules and implement changes without needing to provide any justification. Workers that rely on platforms for incomes face a bleak choice: either passively accept the terms or depart entirely, with no avenue for negotiation. Furthermore, with AI monitoring and the automation of detailed instructions and decisions, workers are forced to strictly adhere to the rules, leaving them little room for errors.

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52 Chinese firm Qweib offers a wide range of products that provide real-time monitoring of people who work outside the office. Product details can be found at Qweib (undated), '[企微宝]业务外勤操作指南 [Field Operation Manual]', https://www.qweib.com//archives/企微宝业务外勤操作指南.
53 Sun, N. (2021), 'China's tech workers pushed to limits by surveillance software', Nikkei Asia, 9 June 2021, https://asia.nikkei.com/Spotlight/The-Big-Story/China-s-tech-workers-pushed-to-limits-by-surveillance-software.

Evaluation

Beyond recruitment and management, AI analytics tools are widely used by Chinese firms to evaluate individual performance and inform HR decisions related to pay and career advancement. From how often workers use company devices, to how fast they reply to messages, AI tracks a wide range of behaviour data and provides insights about employees' performance and value to the organization.

AI recommendations and predictions

Besides impacting the productivity rate, loyalty and morale of employees (as outlined in the previous section), AI models can also predict the growth potential of workers and their value to a firm. Some analytical tools provide management with detailed recommendations on the scale of pay rises, promotions and personnel changes.[54] While human managers still have the final say on these decisions, many of the managers interviewed mentioned that they have grown reliant on these AI insights.[55]

The rationale of firms is that comprehensive workplace surveillance and people analytics tools deter procrastination and incentivize hard work by providing more objective and quantifiable evaluation methods, thereby enhancing overall productivity. By consulting AI-generated insights, HR and management can expedite the evaluation process. They can take prompt action to retain talent when issues are flagged by the system. Firms can also leverage AI to identify the deficiencies and skill gaps of workers and provide training for improvement.

Extensive workplace surveillance

AI analytical tools require significant employee data, which is gathered through extensive workplace surveillance – both software and hardware solutions. Some Chinese firms install online activity monitoring software on workers' laptops to track their real-time screen activities, including chat content, browsing history and modifications to documents. Some AI systems can automatically flag 'suspicious' actions such as visiting recruitment sites or video streaming platforms. Basic 'productivity' reports will summarize employees' time spent on websites and applications.

More sophisticated tools integrate data collected from work collaboration systems like those described in the previous section. They analyse employees' system activities, messages and texts for insights, such as how productive the employee is and how satisfied they are at work. The AI-driven evaluation can extend beyond the professional realm, analysing employees' social media posts to gauge their emotional well-being and loyalty to firms. However, many Chinese office workers refuse to connect personal devices to the office Wi-Fi as this enables employers

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54 For examples of such products, see Beisen (undated), 'Beisen homepage', http://www.beisen.com; Polaris Cloud (undated), '绩效与薪酬管理 [performance and compensation management]', https://www.pekhr.com/lib/tag/512; iHR360 (undated), '新一代智能HR系统 [Next generation of intelligent HR system]', https://www.ihr360.com.

55 Research interviews conducted with HR professionals, under the condition of anonymity, Shenzhen and Beijing, 2023.

to monitor private chats and browsing histories.[56] When workers are away from their desk, their behaviour can also be tracked thanks to AI-enabled surveillance cameras and wearable devices such fitness bands and watches.

Increased workload and competition

In research interviews, many workers reported increased workloads and mental stress due to AI tools. Beyond trying to impress their human supervisors, workers grapple with the additional challenge of satisfying the metrics set by algorithms. To be recognized by AI as a 'good worker', employees often end up working for longer hours at a higher intensity to achieve high performance scores and secure promotion.[57] This has subsequently intensified internal competition among colleagues and eroded job satisfaction.

Unlike the traditional human evaluation where workers gain insights from their direct interaction with their bosses, some workers interviewed mentioned that the criteria emphasized in AI-driven evaluations remain opaque to them.

Many workers find themselves preoccupied with meeting short-term targets to stay competitive, often at the expense of doing more creative and fulfilling work. Moreover, unlike the traditional human evaluation where workers gain insights from their direct interaction with their bosses, some workers interviewed mentioned that the criteria emphasized in AI-driven evaluations remain opaque to them. The lack of clarity has led some workers to feel the need to excel in every quantifiable aspect, resulting in heightened workloads and burnout.

Counterproductive results

The data-driven evaluation process has prompted employees to tactically deploy their work time. For example, one worker interviewed expressed a reluctance to undertake challenging tasks that cannot yield quantifiable results in the short term. Another worker reported that they spend more time writing work diaries and updating the system on their achievements than doing exploratory tasks. This trend could hinder firms' long-term growth, as research shows that a lack of incentives for employees to express creative ideas could lead to stagnation of an organization, due to its decreased ability to innovate and adapt to new situations.[58]

Furthermore, workers question the accuracy and fairness of AI's performance evaluations, as AI struggles to factor in exceptional individual circumstances (such as illness) and recognize the value of exploratory tasks that, although

56 Sun (2021), 'China's tech workers pushed to limits by surveillance software'.
57 Research interviews conducted with mostly office workers, under the condition of anonymity, Shenzhen and Beijing, 2023.
58 Paulus, P. B. and Nijstad, B. A. (eds) (2003), *Group creativity: Innovation through collaboration*, New York: Oxford University Press.

harder to codify, could offer significant long-term value to the firm. For instance, a salesperson who invests time in watching a video to better understand a client's background might be incorrectly labelled as unproductive by AI. It could negatively affect the worker's career, when, in fact, a deeper understanding of the client may have led to a successful work relationship with the client.

AI promises more objective and efficient evaluation of workers based on the notion that human actions can be boiled down to quantifiable metrics for algorithmic analysis. But the reality is far more nuanced, and poorly designed AI evaluation can easily lead to unfair and inaccurate results. On a technical level, the challenge lies in AI's capacity to fully grasp and interpret the subtleties of individual behaviours and the myriad of contexts in which they occur. On an ethical level, who should control AI and how best to assign value and weight to specific behaviours is subject to debate. Without properly addressing these questions, AI evaluation could easily lead to unintended negative consequences for both workers and firms. Furthermore, through quantification, worker behaviours are distilled into mere data points, whose value is determined by firms. This process further tips the power balance in the favour of employers.

Personnel changes and disputes

The growing power that employers wield over workers, amplified by their exclusive access to and control of data and analytics tools, becomes especially evident in scenarios like dismissals and labour disputes. Unequal access to information further diminishes workers' bargaining power particularly in the case of labour disputes. This disparity emboldens firms to adopt even more aggressive and reckless data collection practices, knowing they possess a significant advantage over workers in legal disputes.

Information asymmetry

While there has not been a prominent case of a Chinese firm using AI to fire workers, AI could be utilized to back layoff decisions and provide 'evidence' of worker wrongdoings in labour disputes. Due to AI's capacity to amass extensive personal data throughout a worker's employment, employers' unique access to and control over these data gives firms a significant upper hand during labour conflicts.

As companies increasingly integrate their daily operations into an all-encompassing platform powered by AI, many workers find it challenging to substantiate their work performance in labour disputes, because they lose access to the relevant systems upon dismissal. Conversely, thanks to their continuous monitoring and diligent record-keeping, employers can access a vast reservoir of data on both current and former employees, enabling them to produce 'evidence' that bolsters their position. Chinese workers often have little choice but to consent to far-reaching personal data collection agreements, as a standard onboarding procedure for new positions, leaving them vulnerable in legal cases.

Many Chinese workers interviewed for this paper expressed hesitation in pursuing legal action against their employers, deterred by the vast amount of data controlled by firms and the challenge of gathering evidence independently. This is on top of the already stark disparity in power between employers and workers in terms of time, personal connections and resources.

In 2019, an engineer who worked for a Chinese tech firm for eight years sued his employer after he was fired on the grounds of 'breaching company rules'.[59] During the court hearing, the tech firm used surveillance camera footage to demonstrate that the employee did not spend sufficient time at his desk between 10:00 and 18:00. The engineer argued that the footage did not record his work beyond these hours and his time spent in meetings and at other work locations. But he found it difficult to prove his work performance because all the data were stored in the internal system, which he was denied access to after his dismissal. The group chat messages he presented, which contained work content outside regular hours, were rejected by the court as evidence.

59 TMTPost (2021), '拼多多员工被辞退"罗生门"背后，打工人该怎么自我保护 [Behind the dismissal of Pinduoduo employees, how should workers protect themselves?]', 12 January 2021, https://www.tmtpost.com/4934372.html?code=051IhjGa15ftkA0nA9Ia1sjQHf2IhjGd&state=tmtreward.

04
Key findings in China

AI applications have significant implications for global workers. The key trends from China's implementation of AI tools could provide important lessons for the wider world.

Market-driven development with little regulatory oversight

In China, AI solutions for work have been largely driven by market forces, with little regulatory oversight or input from workers. New products and services are often directly released to the market as soon as they become technologically feasible. To secure a foothold in the workplace solution sector, it is common for Chinese providers to offer customized functions tailored to the specific needs and preferences of their clients. This approach has led to the aggressive design and hasty rollout of AI tools, where firms prioritize profits over the well-being of workers.

While AI indeed improves overall productivity by constantly pushing up the benchmarks, it often overlooks the circumstances under which better results are achieved. As mentioned earlier, in the case of food delivery drivers, the AI system went ahead to reduce target delivery times for all, ignoring the fact that the new goals can only be attained by breaking traffic rules. As a result, productivity enhancement facilitated by AI is often obtained at the expense of the workers, with firms facing few legal consequences.

At present, there is not a specific law in China to regulate the deployment of AI in workplaces. The government largely takes a hands-off approach to the practices of firms that utilize AI, intervening only when some extreme cases gain public and media attention.

After a Shenzhen gaming firm was reported to have installed AI-enabled surveillance cameras on each employee's workstation in early 2022, the *China Youth Daily* – a mouthpiece of the Communist Youth League of China – criticized

the practice in an editorial.[60] The firm subsequently removed the cameras but faced no further punishment. In fact, such mild rebukes are hardly likely deter Chinese firms from jeopardizing the well-being of their employees when tempted by the substantial benefits from adopting AI for work.

Blurring of personal and professional spheres

The significance attached to work in Chinese culture, compared to Western societies, has led to a higher tolerance among people when their personal space is eroded by work matters. In China, there is a deeply ingrained culture in which people value hard work and often prioritize work above personal leisure.[61] The country only introduced the concept of a two-day weekend in 1995.[62]

AI tools are further blurring the already vague boundaries between work and life in China by extending the reach of firms beyond traditional office hours and workspaces. Functions include constant location tracking, online activity monitoring and intrusive notifications. Workers are frequently expected to be prepared to work on demand, turning what should be contingency arrangements into everyday occurrences. Through AI tools, employers gain greater access to workers' personal data beyond what is necessary for the job. This is exacerbated by pervasive data collection and a comparatively utilitarian view of data privacy in China (compared to its Western counterparts).

It is worth noting that major developers of AI work solutions in China also own a range of other applications used in people's daily lives. Alibaba, Tencent and ByteDance – developers behind China's top three pieces of collaborative work software – also operate popular leisure and utility applications ranging from payment and ecommerce to video streaming and online education. This dual role affords them the capability for extensive worker profiling through the centralization of data collected from both professional and personal channels.

Intensified competition and diminishing returns

Both white-collar professionals and gig economy workers on platforms noted an intensified level of competition due to AI.[63] Employers, facilitated by AI, have access to a broader talent pool in which candidates need to meet higher standards to land a job. AI's capability to quantify employee activities and behaviours also makes performance evaluation more challenging for workers, as they can now be compared with their peers on more metrics to discern their value to the firm.

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60 Huang, S. (2022), '摄像头对准工位，"窒息式管理"终究留不住人心 [Employees disapprove of cameras to monitor work]', *China Youth Daily*, http://m.cyol.com/gb/articles/2022-07/14/content_082L2tvaj.html.
61 Harrell, S. (1985), 'Why Do the Chinese Work So Hard?: Reflections on an Entrepreneurial Ethic', *Modern China*,11(2), pp. 203–26, http://www.jstor.org/stable/188906.
62 Hutzler, C. (1995), 'New 2-Day Weekend Has Chinese Packing', *Los Angeles Times*, 29 October 1995, https://www.latimes.com/archives/la-xpm-1995-10-29-mn-62520-story.html.
63 Research interviews conducted with ride-sharing drivers, tech industry workers and HR professionals, under the condition of anonymity, in Beijing and Shenzhen, 2023.

This heightened competition has led to the intensification of work tasks, as workers must adapt to both the ever-accelerating pace set by AI and the additional efforts required to stay competitive in an AI-dominated job market.

While AI algorithms are driving workers to extremes, the benefits of this increased productivity are not being equitably shared. Instead, many workers interviewed for this research paper have seen declining economic returns and worsening work conditions over time. Business models enabled by AI and the designs of algorithms have contributed to this phenomenon.

While AI algorithms are driving workers to extremes, the benefits of this increased productivity are not being equitably shared.

Gig economy platforms typically adopt a 'bait-and-switch' strategy, where firms initially offer attractive incentives to draw in workers or customers, only to reduce or remove these benefits once the platform has secured a dominant market position. In China, platforms like Didi and Meituan initially attracted workers and customers by offering substantial subsidies per order during their initial expansion phase. The high income enticed many individuals to join these platforms as workers, with some even quitting their full-time jobs. However, both platforms have significantly cut the subsidies to workers in recent years as the companies became dominant players in their respective fields, which has affected worker pay. All five drivers for ride-hailing apps interviewed for this research paper said that they have to accept more orders and work for longer to make the same amount of money that they earned a few years ago.

In addition, algorithm design also contributes to workers' intensified workloads and diminished returns. Researchers highlight the role of 'gamification' in algorithm design, wherein tactics usually seen in video games are employed to shape worker response to maximize the platform's profits.[64] In ride-hailing apps, for instance, various strategies are implemented to encourage drivers to stay active for extended periods. Drivers on the Didi app said the platform will reward drivers who are available during peak times with more lucrative orders, which prompts many to start their day as early as 7 a.m. and then not to log off until 10 p.m. to capture both morning and evening peak times. To further incentivize drivers, the platform offers bonus rewards if a driver's daily earnings hit a certain mark. However, several drivers interviewed pointed out that as their earnings approach these thresholds, the system started to allocate them low-value rides, meaning they needed to complete a higher number of rides and stay online for longer to hit the target. As one driver noted, 'Sometimes, it's just not worth it.'

64 van Doorn, N. and Chen, J. Y. (2021), 'Odds stacked against workers: datafied gamification on Chinese and American food delivery platforms', *Socio-Economic Review*, 19(4), pp. 1345–1367, https://doi.org/10.1093/ser/mwab028.

Diverging AI strategies along industry value chains

The research for this paper found that in China, smaller firms and those lacking a competitive edge tend to be more aggressive in their use of AI workforce management compared to industry leading firms. This pattern echoes the perception that low-skilled jobs are more vulnerable to the manipulation and exploitation of AI, as firms that employ these roles often operate in the lower end of industry value chains, such as in primary production.

These companies, such as manufacturers or telemarketing firms, often face stiff rivalry from competing suppliers due to the nature of their products or services compared to those offered by higher-end firms, such as tech companies. Additionally, these companies are sensitive to price fluctuations since they operate on much narrower profit margins. Given the nature of their businesses, these firms have limited opportunities to increase revenue or reduce costs in areas like rent and raw materials. As a result, maximizing the value extracted from labour becomes essential for maintaining their competitiveness in the market. In this context, AI emerges as a valuable tool for controlling the labour process and enhancing productivity. However, companies with limited resources often adopt basic AI solutions focusing on worker monitoring, instead of optimizing operations through big data analytics, which demands greater investment and maintenance.

By contrast, firms sitting at the top of the industry value chain, especially tech giants, typically use more advanced AI systems and big data analytics to identify new trends, make forecasts and update datasets promptly to fine-tune algorithms. Unlike smaller, less-known firms, they are more mindful of potential legal and reputational impacts. For these top-tier firms, although extended hours and increased workloads feature in their work patterns they do not necessarily equate to higher profits; instead, these firms rely more on the innovative contributions of their skilled workforce for growth. In addition, considering the generally higher educational background of employees in these firms and their stronger position in the job market, employers are cautious about implementing overly intrusive control measures that might repel talented workers.

While the use of AI systems for higher skilled workers may be less immediately noticeable or disruptive to employees on the surface, AI tools can still be powerful or even detrimental. The comprehensive control and monitoring of work processes through AI enables firms to utilize all sorts of data against workers, especially when disputes arise.

These findings align with the technological divide highlighted in global value chain literature.[65] This disparity in the capacity of firms and countries to utilize AI will likely intensify the polarization within global value chains. Leading firms, like Google and Amazon, primarily based in the Global North, are more capable of leveraging AI to its full potential and incorporating more nuanced considerations of human rights and worker well-being. Firms engaged in low value-added production segments

65 Lang, J., Ponte, S. and Vilakazi, T. (2022), 'Linking power and inequality in global value chains', *Global Networks*, 23(4), pp. 755–771, https://doi.org/10.1111/glob.12411.

are predominantly situated in the Global South. Limited by their technological capabilities and resources, these firms might only resort to less sophisticated AI tools that focus on enhancing productivity. Furthermore, less developed countries tend to lack robust legal protections and social awareness on privacy and labour rights. It can potentially pave the way for AI to be used in ways that exploit workers and exacerbate conditions for an already vulnerable workforce.

Counterproductive and unintended results

While AI promises greater efficiency, its initial deployment often demands substantial human input. This requirement frequently leads to additional workload and, in many instances, it can slow down operations.

The training of AI algorithms requires large amounts of data, and the initial data processing is still manually done by human workers. Some firms hire low-paid workers in developing countries to label and clean raw datasets to facilitate AI training.[66] In China, this work is often done in-house. For instance, as part of what was originally planned as a week-long project, a software engineer from Shenzhen mentioned that their team had to dedicate an additional two days solely for generating and inputting the relevant data for AI analysis. The additional data processing work added strain to the already gruelling '996 schedule' (9 a.m. to 9 p.m., six days a week) of Chinese tech workers. HR professionals face similar problems. Some mentioned that they spend additional hours collecting and digitalizing employee data to train AI models for candidate matching, as the information is often not in AI-ready formats.[67]

There are heightened risks for firms becoming overly reliant on AI for work management. In addition to the increased data security risks, glitches of AI systems can lead to major operational disruptions and business losses. This over-dependence on AI might start a detrimental cycle in which firms, having replaced human roles with AI, find the remaining workforce increasingly leaning on AI for decision-making due to having a limited number of workers. Such a scenario could cause firms to become short-sighted and less agile in rectifying mistakes.

Many workers develop strategies that aim to please or resist AI algorithms, which could hinder the overall objectives of the firms. For example, AI evaluation prompts some workers to prioritize tasks that can be easily recognized by the system, over more exploratory work that could benefit the firm's strategic interests in the long term. Some gig economy workers also devise strategies to 'game' the system. For example, some taxi drivers interviewed for this paper resorted to 'cheat' software – often a mobile app plugin – to capture high-value fares, while food delivery drivers colluded with restaurants to generate fake orders and then shared the platform

66 Dzieza, J. (2023), 'AI Is a Lot of Work', The Verge, 20 June 2023, https://www.theverge.com/features/23764584/ai-artificial-intelligence-data-notation-labor-scale-surge-remotasks-openai-chatbots
67 Research interviews conducted with HR professionals, under the condition of anonymity, in Beijing and Shenzhen, 2023.

bonuses between them.[68] Employees report lower job satisfaction and increased mental stress in environments where aggressive AI systems are deployed, leading to elevated employee turnover rates that could increase recruitment costs.

While many companies in China see AI as a linchpin to their business success, it does not guarantee greater benefits, especially in the short term.[69] In fact, as shown by the examples above, the substantial investment – both from procurement and subsequent training of algorithms and staff – does not always correlate with clear business returns and could further strain the financial resources of firms.

68 Sun, P. and Chen, J. Y. (2021), 'Platform Labour and Contingent Agency in China', *China Perspectives*, 2021(1), pp. 19–27, https://doi.org/10.4000/chinaperspectives.11325.
69 HR Excellence Centre (2019), 人工智能（AI）在人力资源领域的应用与展望 [*AI in HR*], report, http://hrecchina.com/UpLoadFile/20200430/人工智能（AI）在人力资源领域的应用与展望.pdf.

05
AI problems

While AI adoption may hold great promise there are several underlying issues that can have detrimental impacts. This chapter identifies potential avenues for addressing these issues.

This paper has demonstrated that enhanced efficiency from wider AI implementation does not necessarily translate into the improved job quality and well-being of workers. While there are deep-rooted socio-economic factors unique to China that contribute to these findings, there are also problems related to how AI tools are designed and deployed that have worsened the conditions of workers in China.

Top-down decision-making

AI solutions tend to be developed and deployed in a top-down manner. Key decisions are predominantly made by business leaders and engineers, often excluding insights from the very workers these systems will impact. Entrenched in a bubble of technologists and shareholder interests, AI developers often fail to grasp the broader societal consequences of their innovations. Instead, their decision-making is primarily driven by commercial gains and enhancing user experiences, which depend on improvement of precision, speed and the reliability of algorithms.

Yet, the underlying AI mechanism is far from a neutral, technical optimization. What engineers see as minor tweaks to algorithms can have profound implications for workers. The case of Chinese food delivery drivers breaking traffic rules in response to the reduction of AI-set delivery timings demonstrates how efficiency-driven outcomes can neglect the contexts in which such optimization occurs. As companies implement more advanced AI solutions, they unintentionally establish new workplace norms and standards developed by algorithms designed to enhance productivity.

Whereas engineers traditionally focused on the intricacies of technology, they are now suddenly thrust into positions where their decisions wield broad societal ramifications. However, the prevalent technical-focused education and training

in China rarely equips these professionals with the depth of knowledge required for such wide-reaching decision-making – to adequately achieve this requires inputs from ethicists, policymakers, social scientists and philosophers.

Chinese engineering curriculums lean heavily towards technical knowledge, sidelining humanities subjects essential for fostering responsible and ethical technological development. As a result, when engineers enter the workforce, they frequently find themselves in isolated environments with limited understanding of the daily challenges faced by customer-facing workers. Immersed in fulfilling product improvement requests under tight deadlines and intense schedules, engineers find it challenging to contemplate the broader impacts of their work. Moreover, even those who wish to integrate social considerations into their designs often feel lost due to the absence of clear and actionable guidelines for responsible AI development. [70]

As a result, social impacts are rarely considered when technical decisions are made. This gap can lead to unethical and irresponsible designs and applications at the cost of workers. It is especially dangerous if AI products are deployed at scale and in high-stake scenarios, such as automating redundancies.

AI deployment outpaced worker adaptation

Under fierce competition, Chinese AI firms often rush to launch new products as soon as they identify market opportunities. With little external scrutiny and few regulatory checks, the pace at which new AI solutions are deployed to workplaces often surpasses workers' capabilities to adapt. Workers find themselves compelled to rapidly adjust to changing work environments, requiring them to quickly develop new skills and adapt to novel ways of working. Those unable to rapidly adapt face job insecurity.

With little external scrutiny and few regulatory checks, the pace at which new AI solutions are deployed to workplaces often surpasses workers' capabilities to adapt.

In China, employers typically do not provide sufficient training or time for workers to adjust to AI-driven workplace transitions, and government entities do not provide any relevant training for workers. This leaves employees in the precarious position of having to navigate these new AI systems on their own. As a result, those that cannot adapt often find themselves stuck in low-skilled, low-value roles and struggle to improve their socio-economic status through career progression. If this trend goes unaddressed, it could worsen an already difficult job market in China,

70 Research interview conducted with a Chinese AI scientist, under condition of anonymity, Shenzhen, 2023.

where young people are struggling to get a job. According to the latest available figures, China had a record high jobless rate of over 20 per cent in June 2023 for 16–24-year-olds, before the Chinese government stopped publishing the figure. [71]

In addition, employers face challenges in fully leveraging AI capabilities due to a workforce that lacks the necessary skills to effectively use these tools. Companies attempt to address this skills gap through recruitment. However, as one HR professional pointed out in a research interview, individuals with up-to-date and relevant skills are rare and highly sought after. If the pace of AI adoption is not carefully balanced with the capacity for adaptation among various stakeholders, and without providing sufficient support, this could worsen the mismatch between available talent and the skills needed, potentially undermining rather than furthering business interests.

Lack of regulatory accountability

At present, the implementation of AI tools is largely at the discretion of firms whose primary objectives are productivity and cost-saving. Despite the broad legal implications spanning labour rights, personal data protection, market practices and AI governance, a comprehensive regulatory framework remains elusive.

While in recent years China has strengthened the legal protection of personal data, the new laws mainly focus on the rights of consumers and containing the power of large platform companies.[72] Existing labour laws have not been updated to reflect the changes that digital technologies have introduced to workplaces, nor have they clarified the rights of gig economy workers.[73] Under the strong state support for AI development, Chinese firms are largely free to test the boundaries of technology and push workers to their limits with little legal repercussions. Although they may occasionally suffer reputational damage when aggressive practices trigger media attention and a societal backlash, the impact on Chinese companies tends to be short-lived and has a limited deterrent effect on others.

However, some regulatory progress has been made with the introduction of the 'Provisions on the Management of Algorithmic Recommendations in Internet Information Services' legislation in 2022, following a wide public outcry after a media investigation detailed the plight of food delivery drivers whose schedules and incomes are dictated by aggressive algorithms.[74] The regulation states that platforms providing work dispatch services 'shall protect workers' lawful rights and interests such as obtaining labour remuneration, rest and vacation, etc.'[75]

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71 Liang, A. and Marsh, N. (2023), 'China youth unemployment hits high as recovery falters', BBC News, 17 July 2023, https://www.bbc.co.uk/news/business-66219007.
72 Gibson Dunn (2023), 'Antitrust in China – 2022 Year in Review', https://www.gibsondunn.com/antitrust-in-china-2022-year-in-review.
73 Wang, Y. (2022), 'Employment Law Year-in-review: Out with the Ox, in with the Tiger', Bird & Bird LLP, Lexology, https://www.lexology.com/library/detail.aspx?g=4918cb0f-815c-49fc-882d-2677a687b880.
74 Sheehan, M. and Du, S. (2022), 'How Food Delivery Workers Shaped Chinese Algorithm Regulations', commentary, Carnegie Endowment for International Peace, https://carnegieendowment.org/2022/11/02/how-food-delivery-workers-shaped-chinese-algorithm-regulations-pub-88310.
75 Creemers, R., Webster, G. and Toner, H. (2022), 'Translation: Internet Information Service Algorithmic Recommendation Management Provisions – Effective March 1, 2022', DIGICHINA, https://digichina.stanford.edu/work/translation-internet-information-service-algorithmic-recommendation-management-provisions-effective-march-1-2022.

06 Conclusion and recommendations

This chapter summarizes key implications of AI in China and provides recommendations for stakeholders to help protect workers against the misuse of this technology.

The empirical data examined for this paper underscores a key trend of the AI roll-out in China so far: the expansive integration of AI into critical employment processes (recruitment, management, evaluation and personnel changes) has amplified the power imbalance between employers and employees, putting workers at greater risk of exploitation. Enhanced efficiency achieved through AI has not translated into better job quality for workers.

Access to data is a critical factor in the relationship between employers and their workers. Through control of data and algorithms, employers process and utilize much more information than their employees, which puts companies in a strong position in negotiations and other situations such as workload considerations. Firms are reshaping the rules and norms through opaque algorithms that remain incomprehensible to workers.

The implementation of AI tools can be reductive. The quantification of work processes necessary for AI reduces complex production activities and worker input into simple data points. This leads to diminished autonomy for workers as they must follow increasingly prescriptive instructions and meet ever-higher goals with their behaviours monitored online and offline. Notably, supported by greater computing, AI makes more detailed task division possible, which could further de-skill workers, as they are increasingly responsible for a smaller segment of production.

With AI driving the rise of flexible work, workers find themselves struggling to negotiate better terms with employers. This is particularly evident in the gig economy, in which workers are classified as 'independent contractors'. This allows firms to sidestep many of the obligations and responsibilities they would typically have for full-time employees. Gig economy workers are often geographically

dispersed, have a high turnover rate and have limited interaction with others. These isolated working patterns make it challenging to mobilize collective action for effective bargaining.

Although AI often empowers workers by liberating them from tedious, repetitive tasks, it does not necessarily alleviate their workload. Instead, firms often recalibrate and impose new tasks to optimize human labour. Moreover, as AI takes over less complicated and standard tasks, the remaining jobs for human workers are becoming more challenging. To adapt to such a work environment requires relentless efforts from human workers to retrain and upskill, adding to the already heavy burden of workers – in particular those with lower AI literacy (e.g. marginalized populations and the elderly). As a result, the enhanced efficiency achieved through AI has not translated into better job quality for workers.

This paper recognizes employment as a high-stakes and high-risk area of AI application, given the significant and foundational shifts these new tools are bringing to workplaces. Such AI applications should undergo close examination by multiple stakeholders, particularly workers. A collaborative approach engaging businesses, workers, unions, industry bodies, investors and policymakers is essential to ensure that these powerful tools are developed and deployed with a human-centred approach.

Findings from this research provide fresh insights for global policymaking, highlighting aspects that are often missed in Western-focused discussions. The following recommendations are targeted at government bodies and policymakers responsible for developing regulation, legislation and enforcement of rules relating to the design and deployment of AI in workplaces in China. However, these recommendations have a global relevance, particularly for workers and stakeholders concerned with the speed at which this technology is developing. The AI development environment in China offers many insights into the real-world implementation of AI.

Policy recommendations

As AI enters workplaces, it is crucial that policymakers, civil society and companies address the growing power imbalance between employers and employees. The following section provides two categories of recommendations: policies that empower workers, and measures that check the power expansion of employers.

Worker empowerment

Integrate worker protections into AI and data regulations. To protect the rights of employees, policymakers should consider the potential impact of AI on the workforce during the consultation and formation of new AI legislation. Inclusion of protections will provide a legal basis for workers to defend their rights. For example, the EU Artificial Intelligence Act considers employment as a 'high-risk' area in which related AI systems need to be registered with local authorities and assessed internally or by a third party before they can be put out on the market.

Members of civil society and the media can help inform policymakers with insights and first-hand evidence from workplaces. For example, it was the work of journalists and scholars in China that first raised awareness of the plight of delivery drivers – which led to the new algorithmic recommendation regulation explicitly requiring platform operators to protect workers' rights to obtain fair pay, rest and holiday leave.

Enhance worker representation in AI deployment. This research paper has found that the interests of Chinese workers are not reflected in AI tools partly because employees are excluded from crucial decision-making on AI adoption. Therefore, it is important for worker organizations and companies to establish an effective communication mechanism through which companies can consult workers on new AI tools and workers can reflect their experiences and flag concerns to management. The mechanism should also facilitate the formulation of negotiated agreements between workers and management on the optimal use of AI.

Improve transparency and ensure workers' rights to data. The lack of access to necessary information often hinders the ability of workers to challenge employer misconduct. Policymakers should mandate that companies seek explicit approval from employees and candidates for collecting their personal data – rather than burying such information in employment contracts. Workers should be given the legal right to access their personal data during and after employment, as well as to request personalized and easy to understand explanations of how their data are processed through specific AI systems at workplaces.

Provide adequate training for upskilling. Of those interviewed for this paper, many workers are stuck in positions with deteriorating conditions due to a lack of new skills and abilities to secure alternative roles, which has diminished their bargaining leverage against employers. Education policymakers should explore ways to provide accessible training and reskilling for workers, potentially through social schemes or subsidized courses through private entities. Initiatives like the UK's apprenticeship scheme, where the costs of skills training is shared by both governments and employees, can serve as a model for upskilling in the AI era.

Checking the power of employees

Curb developer market monopolies. Market regulators should be more vigilant of the anti-competitive behaviours of developers and operators behind AI work solutions (who may also operate non-work platforms that collect data, such as Bytedance, which owns work tool Feishu and short-video platform Douyin). Stronger anti-monopoly enforcement and measures to foster competition can prevent unchecked expansion of leading developers under the guise of AI innovation.

Set clear limits on data collection in employment contexts. Private enterprises in China have significant discretion in collecting and processing personal data during key employment stages, due to the inherent power imbalance between workers and employers. Data that are not directly related to work, such as biometric information, social media posts and financial records, have been collected for AI training and insight generation. This unchecked freedom has led to the aggressive and ethically questionable use of AI. Therefore, policymakers should set clear boundaries on what kind of data can or cannot be collected and processed by private enterprises,

specifically in the employment context, so that employers can be held accountable for their practices. National personal data protection regulations can be used as a base for developing context-specific rules.

Control the pace of AI deployment in workplaces. When solely driven by market forces, AI implementation in China has led to deteriorating job quality for workers and unemployment as a result of deskilling. Therefore, policy intervention is needed to control the pace of the roll-out of AI work products to give workers ample time to adapt to the changing work environment. Policymakers should introduce comprehensive social and economic impact assessment requirements before novel AI work products are approved for launch to market. To ensure that firms are abiding by these standards, robust audits and reviews should be carried out on a regular basis throughout the deployment of AI tools.

About the author

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Cover image: Meituan food delivery people attend a morning meeting in a street in Dongguan, Guangdong Province, China.
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