

Ethical AI Practices of E-Commerce Companies in Selected Cities in China: A Proposed Policy Guide

Jinshan Lu

900 San Marcelino St, Ermita, City of Manila, 1000 Metro Manila
Jinshan.lu@adamson.edu.ph

Abstract: This study investigates the current state and critical challenges of ethical artificial intelligence (AI) practices within leading e-commerce companies—Alibaba, JD.com, Meituan, and Pinduoduo—in selected cities in China. Through a mixed-method approach incorporating quantitative surveys of employees and qualitative interviews with management, this research explores perceptions surrounding fairness, transparency, accountability, and privacy in AI applications. Results indicate a high degree of consistency in employee perceptions across different demographic groups, highlighting the importance of corporate culture and standardized ethical guidelines. Management interviews reveal significant ethical concerns, such as balancing innovation with privacy protection, mitigating algorithmic biases, and enhancing AI transparency and accountability. Based on these findings, the study proposes a detailed policy guide emphasizing strengthened governance structures, comprehensive transparency mechanisms, robust privacy controls, and continuous ethical training. These policy recommendations provide practical guidance for Chinese e-commerce companies striving to deploy AI ethical and responsibly.

Keywords: Ethical AI; E-commerce; AI governance; Algorithmic fairness; Transparency; Accountability; Privacy.

1. Introduction

The rapid integration of Artificial Intelligence (AI) in the e-commerce sector has transformed business operations and consumer interactions, but it also raises significant ethical concerns. These concerns primarily revolve around transparency, fairness, and the potential for bias in algorithmic decision-making. In China, four major e-commerce companies—Alibaba, JD.com, Meituan, and Pinduoduo—have led the charge in deploying AI-driven technologies, but their practices have not been extensively analyzed from an ethical standpoint. This study aims to bridge this gap by investigating the ethical AI practices of these companies, exploring the challenges and implications of their AI systems.

AI governance in China's e-commerce sector remains under-researched, especially with regard to balancing innovation, consumer protection, and regulatory requirements. This study will assess the ethical challenges these companies face in implementing AI, focusing on management perspectives, and will propose a policy guide to ensure the responsible use of AI. In doing so, the research aims to contribute valuable insights to policymakers, regulatory bodies, and academia, helping to foster sustainable practices that protect consumers while supporting business growth.

Through the adoption of the FAT (Fairness, Accountability, and Transparency) framework, this study will evaluate how employees from these companies perceive and engage with ethical AI principles, shedding light on the role of organizational culture in AI ethics. Additionally, the study will examine the potential for this policy guide to serve as a framework for future legislative measures that balance innovation and consumer rights in the digital marketplace.

The findings will also provide important perspectives for international scholars and researchers, offering a foundation for future studies on AI ethics across various industries and regions. By promoting responsible AI practices, this research intends to enhance consumer trust, minimize risks associated

with biased algorithms, and support the development of regulations that promote fair competition in the digital age.

2. Literature Review

2.1. Justification of the Research Problem

Existing studies have predominantly focused on regulatory frameworks and broad ethical AI principles but rarely offer empirical insights into corporate-level AI implementation in e-commerce. Moreover, few studies consider regional disparities within China or the perspectives of both frontline employees and executives. This gap underscores the need for a targeted, multi-dimensional evaluation of ethical AI practices within leading digital platforms.

2.2. Methodological Soundness

Prior research highlights the need for both quantitative and qualitative perspectives to assess ethical AI practices. This study's design—using surveys and semi-structured interviews—aligns with best practices for organizational behavior and ethics research. The combination enhances validity and provides both depth and breadth to the findings.

3. Method

This study adopted a descriptive research design to evaluate and analyze the ethical practices of Alibaba, JD.com, Meituan, and Pinduoduo in the application of artificial intelligence (AI), especially the employees' perception of these practices. Descriptive research design is a research method that does not intervene in variables and is particularly suitable for analyzing real-world situations, such as the AI ethical issues in e-commerce platforms that this study focuses on.

In terms of data collection, this study collected feedback from employees and management of e-commerce platforms through questionnaires and semi-structured interviews. The content of the questionnaire covered the dimensions of fairness, transparency, accountability, and privacy protection

of AI ethical practices, while the semi-structured interviews explored in depth the ethical challenges and issues faced by management in the implementation of AI technology. After data collection, the study will use a combination of quantitative and qualitative analysis to organize and summarize the collected data, focusing on the differences in employees' perceptions of AI ethics and exploring whether these differences are related to personal background (such as educational background, department, digital engagement, etc.).

In addition, this chapter also explains how to integrate the core concepts of ethical practice into the research framework, including algorithmic fairness, transparency, privacy protection, and accountability, and constructs a theoretical framework to systematically guide subsequent analysis and discussion. Through this approach, the study not only reveals the current status of AI ethical practice in China's e-commerce industry, but also provides theoretical support and practical guidance for relevant policy formulation.

4. Data

The data set includes:

Quantitative: 120 respondents evenly distributed across Alibaba, JD.com, Meituan, and Pinduoduo, representing departments such as AI engineering, compliance, operations, and customer service.

Qualitative: 12 senior management professionals offering strategic insights into AI deployment, ethics, and governance.

Demographics reveal most respondents hold at least a bachelor's degree and engage daily with AI systems, ensuring data relevance and credibility.

5. Results

Findings show:

A consistent perception of ethical AI practices among employees across different companies and cities.

Strong agreement on the importance of fairness and privacy, with transparency and accountability showing room for improvement.

No significant differences in perception across demographic variables.

Managers emphasized the difficulty in balancing innovation with ethical oversight, as well as challenges in algorithmic fairness and compliance enforcement.

These results form the empirical basis for the proposed Ethical AI Policy Guide.

In addition to the general trends, further analysis revealed notable variations based on job function. For example, AI engineers demonstrated a higher awareness of technical fairness issues such as model bias and data imbalance, whereas employees in marketing and operations were more focused on privacy and user consent. This suggests that ethical AI awareness is influenced by the nature of one's role within the organization, highlighting the need for tailored training programs.

6. Discussion

The discussion links empirical findings with theoretical constructs such as the FAT (Fairness, Accountability, Transparency) framework and Privacy by Design (PbD). Despite high-level commitments to ethical AI, gaps remain in employee awareness and policy enforcement. The study recommends institutionalizing AI audits, enhancing internal

training on AI ethics, and promoting algorithmic transparency to bridge this gap. Furthermore, regional disparities suggest the need for localized AI governance models in China.

The disparities in awareness and implementation across departments suggest that ethical AI cannot be achieved through a one-size-fits-all policy. Instead, organizations must embed ethical considerations into specific workflows. For instance, product design teams should include fairness assessment tools, while marketing teams may require training on consent and data minimization. This departmental integration is critical to move from high-level ethical aspirations to actionable compliance.

Furthermore, the findings align with stakeholder theory, which emphasizes the responsibility of firms not only to shareholders but to all parties affected by their operations—including users, regulators, and civil society. E-commerce firms in China are uniquely positioned to lead by example due to their global scale and influence. As such, incorporating stakeholder input into AI governance mechanisms—through feedback loops, ethical review boards, and public consultations—could significantly enhance both legitimacy and effectiveness of ethical AI policies.

7. Conclusion

This study offers an original contribution by empirically assessing ethical AI practices across China's top e-commerce platforms and proposing a practical policy guide grounded in real-world observations. By combining frontline and executive insights, the research bridges theoretical and practical domains. The proposed guidelines aim to help companies balance innovation with ethical integrity, foster consumer trust, and comply with evolving regulations. Future research can extend this model to other digital sectors and international contexts.

This study presents an integrated view of how ethical AI principles are interpreted and practiced in China's e-commerce industry. By employing a mixed-methods approach, the research surfaces both strengths and gaps in current practices, particularly around fairness and privacy, as well as persistent weaknesses in transparency and accountability.

To address these challenges, the study recommends that e-commerce firms establish internal AI ethics task forces composed of cross-functional stakeholders from legal, engineering, and customer service departments. These units should be responsible for conducting AI impact assessments, monitoring algorithmic performance, and reporting directly to executive leadership.

From a regulatory standpoint, policymakers should pursue adaptive governance strategies that provide sector-specific guidelines while encouraging innovation. For instance, incentive-based regulatory sandboxes could help firms test new AI tools while adhering to ethical benchmarks set by public regulators.

Finally, this study provides a replicable framework for future research across other AI-intensive industries such as fintech, healthcare, and logistics. The proposed Ethical AI Policy Guide serves not only as a reference for e-commerce companies in China but also as a strategic tool for international organizations aiming to promote responsible AI adoption across borders.

References

- [1] A. Jobin, M. Ienca, and E. Vayena, "The global landscape of AI ethics guidelines," *Nature Machine Intelligence*, vol. 1, no. 9, pp. 389–399, 2020.
- [2] H. Liu and Y. Zhang, "Algorithmic governance and ethical implications in the Chinese e-commerce context," *Journal of Business Ethics*, vol. 174, no. 3, pp. 521–539, 2021.
- [3] L. Floridi and J. Cows, "A unified framework of five principles for AI in society," *Harvard Data Science Review*, vol. 1, no. 1, 2020.
- [4] I. D. Raji and J. Buolamwini, "Actionable auditing: Investigating the impact of publicly naming biased performance results of commercial AI products," in *Proc. AAAI/ACM Conf. AI, Ethics, and Society*, 2020, pp. 429–435.
- [5] S. Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. New York: PublicAffairs, 2020.
- [6] P. Wang and Y. Li, "Data privacy challenges and AI governance in China's platform economy," *Asian Journal of Communication*, vol. 30, no. 6, pp. 489–507, 2020.
- [7] W. Xu and S. Wang, "Algorithmic fairness in Chinese e-commerce: A study of user perception," *Chinese Journal of E-Business*, vol. 19, no. 3, pp. 112–127, 2020.
- [8] B. Binns, "On the apparent conflict between individual and group fairness," in *Proc. ACM Conf. Fairness, Accountability, and Transparency (FAT)*, 2020, pp. 514–524.
- [9] X. Chen and Y. Huang, "AI ethics in Chinese e-commerce: Risks and governance strategies," *Technology and Society*, vol. 43, pp. 1–12, 2021.
- [10] J. Zhao and L. Xu, "AI-driven pricing and socioeconomic equity in digital marketplaces," *Journal of Consumer Policy*, vol. 45, no. 2, pp. 197–216, 2022.
- [11] Y. Liu, H. Zhang, and J. Li, "Privacy-by-design in AI governance: A case study of PIPL compliance," *Asia Pacific Journal of Information Systems*, vol. 31, no. 4, pp. 411–428, 2021.
- [12] Y. Sun, "Public perceptions of AI in e-commerce: Survey evidence from major Chinese cities," *E-Government Studies*, vol. 17, no. 2, pp. 101–119, 2021.
- [13] X. Chen and T. Zhang, "Corporate responses to AI ethical dilemmas in China," *China Business Review*, vol. 36, no. 1, pp. 25–40, 2022.
- [14] J. Zhang and H. Liu, "Ethical innovation and AI policy development in e-commerce," *Journal of Technological Ethics*, vol. 29, no. 1, pp. 33–52, 2023.
- [15] L. Xiao and J. Chen, "Transparency challenges in AI deployment in digital marketplaces," *Journal of Digital Policy & Regulation*, vol. 12, no. 2, pp. 75–89, 2024.