

A Study on AI Utilization Behaviors and Ethical Cognition from the Perspectives of Social Governance and Economics - Empirical Analysis Based on Public Survey Data

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Abstract. With the deep penetration of Artificial Intelligence (AI) technology in production and life, its ethical risks and governance needs have become increasingly prominent. This paper combines 307 questionnaire data on AI usage behavior and ethical cognition, as well as several core academic literatures, to systematically analyze the public's cognitive characteristics of AI ethical issues, existing governance shortcomings, and propose non-legislative oriented multifaceted solutions. The study finds that: the public AI usage rate among the interviewed population reaches 60.59%, and the core users are the middle and grass-roots groups aged 26-35 years old, presenting the characteristics of "light products, light scenarios, and light inputs"; the ethical concerns are focused on the leakage of data privacy and algorithmic bias; and the governance needs prioritize the reliance on corporate self-regulation and government supervision. Combined with academic research, it is suggested to build a governance system through technological optimization, enterprise management and social collaboration to achieve a balance between AI technological innovation and ethical risk prevention and control.

Keywords: Artificial Intelligence (AI), Usage Behavior, Ethical Perception, Questionnaire, Social Governance

1. Introduction

1.1. Research background

In recent years, artificial intelligence (AI) technology has reached a stage of large-scale application, with products such as generative AI and intelligent voice assistants becoming essential to the public. However, alongside these technological advancements, ethical risks have emerged. Concerns regarding data privacy abuse and the fairness of algorithmic decision-making have intensified, while debates surrounding the copyright of AI-generated content and the potential decline of creativity due to over-reliance on technology have sparked extensive discussions. Furthermore, significant shortcomings persist in the current ethical governance of AI. At the technical level, the "black box" nature of algorithms presents uncontrollable risks; at the enterprise level, certain platforms engage in excessive user data collection; and at the social level, the public's ability to recognize ethical risks

remains inadequate. Thus, developing a flexible governance system that prioritizes public awareness and non-compulsory legislation has become crucial for the sustainable development of AI technology.

1.2. Research significance

At the theoretical level, this study elucidates the intrinsic relationship between AI usage behavior and the requirements for ethical cognition and governance, as evidenced by empirical data. This contribution addresses the shortcomings of existing ethical research, which often prioritizes theoretical frameworks over empirical validation, thereby offering support for ethical governance from a micro-level perspective. Practically, the multi-dimensional solutions proposed in this study for technology, enterprises, and society serve as direct references for AI product development, platform operations, and public education. These solutions aim to balance technological innovation with ethical risks and to bolster public trust in AI technology.

2. Literature review

2.1. AI ethics core risks study

Existing research categorizes AI ethical risks into three dimensions: data, algorithm, and social impact. In the data dimension, Zhou Hanhua [1] argues that data, unlike traditional production factors, is best protected by liability rules. He contends that the establishment of rights can lead to the "tragedy of the anticommons," where multiple stakeholders complicate data sharing. This assertion aligns with the finding that 68% of respondents in a questionnaire are unaware that their data is utilized for training purposes. Yao Jia [2] emphasizes, from the perspective of "intelligence emergence," that achieving a "balance between quality and quantity" of training data is crucial for successful outcomes. He further notes that low-quality data may intensify the issue of AI "illusion," which corresponds with Cao Jianfeng's [3] identification of the risk of generative AI's "factual fabrication," where only 25% of the output is true and credible most of the time.

Jiang Xiaojuan [4] emphasized that the concept of "weak order" in the era of digital intelligence may exacerbate algorithmic bias. Specifically, AI systems trained on historically biased data could increase the likelihood of discrimination by 30% to 50%. Concurrently, questionnaire data supports this assertion: 53.75% of respondents believe that "geographical/gender discrimination by algorithms" is a significant issue, with users in the education sector exhibiting the highest sensitivity to algorithmic fairness; 89% of this subgroup consider it a serious concern. In terms of social impact, Wang Siao [5] cautioned that the misuse of AI could facilitate fraud, rumor-mongering, and other criminal activities. Notably, 41.04% of the public expressed concern regarding "AI generating false information" in the questionnaire.

2.2. AI ethical governance path study

Scholars have put forward governance ideas around the synergy of "technology-corporate-society". At the technical level, research [3] advocates risk reduction through "constitutional AI" (AI supervising AI) and red team testing (professional attack testing before model release), and OpenAI passed the test of more than 50 experts before the release of GPT-4, which reduced harmful outputs by 30%; at the enterprise level, Zhou Hanhua [1] emphasizes "downplaying ownership and emphasizing the right of use", and suggests that enterprises establish a "data authorization electronic filing system", which is the same as the questionnaire. At the enterprise level, research [1] also

emphasized "downplaying ownership and emphasizing the right to use", suggesting that enterprises should establish a "data authorization electronic filing system", which is consistent with the demand of 37.13% of the public in the questionnaire who expects "enterprises to disclose their algorithmic logic." At the social level, Jiang Xiaojuan [4] proposes the synergy of "weak order + strong order", arguing that weak order such as open source communities and industry standards can flexibly respond to rapid technological change.

3. Research questions, methodological design and sample characterization

3.1. Core research question definition

This study aims to investigate whether significant group differences exist in public perceptions of AI ethical risks and whether these differences align with the theory of "group stratification in the age of digital intelligence" in academic research. Specifically, it will examine whether the stratification of ethical concerns among groups differentiated by age, occupation, and frequency of use corresponds to the stratification characteristics associated with the penetration of digital intelligence. Second, the research will identify the specific shortcomings of AI ethical governance across three levels: technology, enterprises, and societies. It will also explore whether there is a direct correlation between these shortcomings and the public's perception of key pain points, particularly concerns regarding data privacy and anxiety about algorithmic bias. Third, the study will propose a non-legislative governance framework that is both practical and grounded in empirical data and academic theories, aiming to achieve a dynamic balance between technological innovation and the prevention and control of ethical risks.

3.2. Research methodology

This study employs a mixed research design that integrates quantitative research with literature analysis to enhance both the empirical and theoretical depth of the findings. For the quantitative component, data were gathered using the Questionnaire on Artificial Intelligence (AI) Usage Behavior and Social Ethics Cognition, which was administered through an online stratified sampling method. This sampling approach accounted for dimensions such as age, occupation, education, and income level, ultimately yielding 307 valid samples. The questionnaire encompasses three modules: AI usage behavior (including usage rate, usage scenarios, and degree of investment), ethical risk perception (covering data privacy, algorithmic bias, intellectual property rights, and other relevant dimensions), and governance demand preferences (including corporate self-regulation, industry standards, government regulation, and additional directions). Descriptive statistics present the overall cognitive characteristics, while cross-tabulation analysis reveals group differences. In the literature component, we systematically review core literature in the domains of digital governance, data property rights, and AI ethics. This review emphasizes the integration of findings from researches [1-3] on misconceptions of data rights, the challenges of generative AI governance, and training data systems, thereby providing theoretical support for the empirical conclusions.

4. Analysis of AI ethics cognitive status and governance shortcomings

4.1. Core features of ethical cognition

The public's perception of AI ethical risks presents distinctive structural features, which are specifically manifested in the gradient of risk perception, the differentiation of group cognition, and

the diversification of governance needs.

The gradient of risk perception is evident in the stratification of public concerns regarding various ethical issues, particularly around "direct interest relevance," as illustrated in Table 1. Data privacy leakage and algorithmic bias emerge as primary concerns, with 55.05% of respondents categorizing data privacy leakage as "very serious." This finding aligns with Zhou Hanhua [1]'s assertion that "data privacy is the primary contradiction in AI governance," as such risks directly threaten personal rights and interests, including the misuse of chat logs and geographic location data, which can lead to discrimination in employment. In contrast, concerns regarding the ambiguity of intellectual property rights related to AI-generated content and the potential decline in creativity due to over-reliance are comparatively lower. The former primarily involves disputes between enterprises, such as copyright issues concerning training data, while the latter represents an indirect and long-term concern with minimal correlation to the immediate interests of ordinary users [2]. Although the study [3] highlights the "fact fabrication" problem associated with generative AI, which may contribute to misinformation risks, public concern remains lower than that for data privacy and algorithmic bias. This observation underscores that individuals tend to be more sensitive to "immediate risk" than to "diffuse risk."

Table 1. Percentage of people with public perception of the seriousness of AI ethical issues (sample size 307)

Ethical Issue	Serious	Very Serious
Personal Data Privacy Breach	55.05%	10.75%
AI algorithmic bias (geographic/gender)	53.75%	12.38%
AI-generated content intellectual property rights blurred	38.11%	16.29%
Overdependence leads to decreased creativity	40.07%	17.59%

Group cognitive differentiation is influenced by AI usage scenarios, technology awareness levels, and interest relevance [4]. In terms of age, individuals aged 26 to 35 express the greatest concern regarding algorithmic bias, stemming from their frequent exposure to algorithmic decision-making in contexts such as hiring and credit assessments. Conversely, individuals aged 56 and older exhibit heightened anxiety about data privacy breaches, which can be attributed to their limited digital literacy. Regarding career, respondents from the education sector are particularly worried about the effects of AI on students' learning capabilities, as this pertains to fostering independent learning. Those in the Internet industry prioritize algorithmic transparency, given their foundational technological knowledge, while finance industry respondents emphasize algorithmic fairness, which is closely linked to algorithmic decision-making in risk management scenarios. Furthermore, users who engage with AI daily possess a more nuanced understanding of ethical risks, identifying more than three types of risks. In contrast, occasional users typically recognize only one or two types of risks, concentrating primarily on data privacy issues. This observation supports the principle that increased frequency of use correlates with greater exposure to risk scenarios and a more comprehensive perception of associated risks.

The diversification of governance needs is evident in the public's strong preference for non-legislative, flexible governance, as illustrated in Table 2. This finding aligns with Cao Jianfeng [3]'s assertion that "pluralistic governance is better than single legislation". Specifically, 37.13% of interviewees advocate for "strengthening self-regulation by enterprises," anticipating that companies will address ethical issues by disclosing algorithmic logic and optimizing data authorization mechanisms. Additionally, 36.81% support "industry associations establishing unified standards,"

believing that these organizations possess greater expertise regarding the technology's characteristics and can develop a flexible and suitable ethical authentication and complaint mechanism. In contrast, only 28.01% of respondents favor "the government introducing special laws and regulations," with their demands primarily focused on enhancing foundational rules, such as data protection regulations, rather than imposing mandatory controls. This preference reflects the rapid iterative nature of AI technology; rigid legislation often lags behind technological innovation, while corporate self-regulation and industry collaboration can more effectively address ethical risks in a timely manner [4].

Table 2. Public preferences for AI ethical problem solving (data sample size 307, questions in multiple choice format)

Governance approach	Number of selections	percentage
Enhanced self-regulation by industries	114	37.13%
Industry associations establish harmonized standards	113	36.81%
Specialized laws and regulations introduced by the government	86	28.01%
Public Raises AI Ethics Awareness	74	24.10%

4.2. Three current shortcomings in ethical governance

The current ethical governance of AI, informed by empirical data and academic research, reveals three primary shortcomings: non-transparent technology, lack of self-discipline among enterprises, and insufficient societal coordination. These deficiencies directly align with public perception challenges, resulting in a paradoxical situation characterized by high-risk perception coupled with low governance capability.

The shortcomings of the technical level focus on the algorithmic black box and insufficient data protection, which directly exacerbate the public's concern about data privacy and algorithmic bias. 82% of the respondents said that they were "not clear about the basis of the AI's decision-making", and only 18% have used "algorithmic interpretation functions" (e.g., ChatGPT's thought process display). ChatGPT's thought process demonstration), reflecting the fact that the non-interpretability of large models can easily lead to uncontrollable risks [3]. Weak data protection mechanism: 68% of the respondents reflected that "they have been collected data without their knowledge", some AI products excessively ask for permissions (e.g., intelligent voice assistants ask for location permissions), and only a small portion of them support one-click deletion of historical data, which is contrary to the proposal put forward by Zhou Hanhua [1].

The shortcomings at the enterprise level are reflected in the formalization of the code of ethics and the absence of a review mechanism, which is in contradiction with the public's demand to "prioritize reliance on corporate self-regulation". Ethical guidelines are mostly "slogans" and lack specifications: only half of AI companies have made their ethical guidelines public, and 30% of them have not specified the standards for implementation - for example, they only mention "respecting intellectual property rights", but do not specify the copyright review process for training data. For example, they only mention "respecting intellectual property rights" but do not explain the copyright review process of training data; they only promise to "avoid algorithmic bias" but do not publicize the bias detection index [2]. Regarding the ethical review process, 62% of respondents believe that AI products have not undergone rigorous ethical testing before going live, and companies generally neglect the review of data legality at the R&D stage, the fairness test of algorithms before going live, and the monitoring of ethical complaints during operation.

The shortcomings at the social level are manifested in the uneven digital literacy of the public and the insufficient channels for industry supervision, making it difficult to form a governance synergy. The public's digital literacy is significantly differentiated, with only 28.01% of respondents being able to clearly distinguish the difference between "reasonable use of AI" and "misuse"; 35% of students rely excessively on AI to complete their homework; and 78% of those over 56 years old don't know how to turn off AI data collection privileges, reflecting the shortcomings of digital literacy in the older age group. 78% of the 56+ age group do not know how to turn off AI data collection privileges, reflecting the shortcomings of digital literacy in the older age group [5]. The serious lack of industry supervision channels is reflected in the fact that only 19.54% of respondents know how to report AI ethical issues, and industry associations have yet to establish a unified ethical complaint platform, resulting in no way for the public to give feedback.

5. Multiple solutions based on public perception and academic research

5.1. Technology optimization: transparency and privacy as the core

Technological optimization should focus on algorithm interpretability and data lifecycle protection to accurately solve technical shortcomings, and at the same time match the public's demand for algorithm comprehensibility and data control. The implementation of algorithm explainability technology needs to adopt a "layered explanation" mechanism: provide generalized decision-making explanations for ordinary users, and open "technical parameter explanations" for professional users (e.g., enterprise customers), covering algorithmic feature weights, training data sources and other content. Internet industry users and workplace groups support this program, and Cao Jianfeng [3] pointed out in the study of generative AI governance that algorithm transparency needs to be adapted to the cognitive level of different users, so the design of the layered explanation mechanism needs to take into account the general understanding of ordinary users and the technical needs of professional users, to avoid cognitive faults due to the technical threshold. At the same time, it is necessary to establish "algorithmic fairness" test tools, the development of standardized testing templates by third-party institutions, such as the design of credit AI geographic discrimination index, enterprises need to pass the test and public results before going online, Jiang Xiaojuan [4] in the digital age of the order of the research emphasized that algorithmic fairness needs to be achieved through quantitative assessment, the construction of this tool is precisely the quantitative assessment of the demand for the construction of this tool. The construction of this tool is precisely a practical response to the need for quantitative assessment.

At the same time, data lifecycle protection needs to implement the principle of "minimum necessary and dynamic authorization"; which means AI products only collect the data necessary for the service and support users to adjust the scope of authorization in real time. 68% of the respondents who are concerned about data privacy believe that this measure can effectively reduce the risk of leakage, and Zhou Hanhua [1], in his research on data rights, suggests that data governance should dilute the ownership and emphasize the right to use. In the study on data rights, suggests that data governance should downplay ownership and emphasize the right to use, and the design of dynamic authorization mechanisms is precisely to put users' control over the right to use the data into practice, avoiding the problem of loss of control after data collection. In addition, it is necessary to develop "data desensitization and traceability technology", adopting techniques such as federated learning, differential privacy (adding noise to protect the identity), and at the same time, establishing a data usage traceability system, so that users can check the number of times and scenes of data usage. Yao Jia [2] mentioned in the study of AI training data system, training data need to

realize the whole process can be controlled, the combination of data desensitization and traceability technology is just for the whole process can be controlled to provide technical support, for example, Ali's "Trusted Data Space" product through the "available invisible" design and traceability technology. For example, Ali's "Trusted Data Space" product has provided a practical example for data protection through its "available but not visible" design and traceability query function.

5.2. Industry governance: self-regulatory guidelines and ethical review as the core

Enterprises need to build a feasible code of ethics and a full-process review mechanism to make up for the lack of self-regulation and respond to the public's expectation for "enterprises to take the initiative to assume responsibility". Ethical guidelines should cover the three dimensions of data, algorithms, and scenarios: data should specify the scope of collection and authorization; algorithms should stipulate fairness testing standards; and scenarios should prohibit inducing excessive reliance. In the survey, those who support corporate self-regulation emphasize that "the code should be concrete rather than slogans", and Cao Jianfeng [3] suggests in his study on credible AI governance that corporate ethics should be embedded in the whole life cycle of the product, so the coverage of the code of ethics should be throughout the collection of data, algorithmic design, and scenarios, and should not only stay at the level of abstract expression. At the same time, it is necessary to establish a user participation mechanism, and enterprises should invite representatives of users of different ages and occupations to participate in the formulation of the guidelines; Zhou Hanhua [1] pointed out in his study on data governance that user participation is an important part of data governance, and the establishment of this mechanism can ensure that the design of the guidelines is more closely aligned with the actual needs of users, and reduce the one-sidedness of the enterprise's unilateral formulation of the guidelines.

The full-process ethical review mechanism should cover the entire stages of research and development, launch and operation. In the research and development stage, the legality of data sources should be examined, with a focus on checking copyright and privacy compliance; ethical risk tests should be conducted before launch, including dimensions such as algorithmic bias and generation of false information; and user feedback should be monitored in operation, and an "Ethics Complaints Zone" should be set up to respond to problems in a timely manner. Respondents who think there is a "lack of review" suggest disclosing the results of the review. Reviewing the legality of training data is the bottom line of AI ethics, and reviewing the legality of data at the R&D stage is precisely a way of upholding this bottom line, while risk testing before launch and feedback monitoring during operation will further carry out ethical review throughout the entire life cycle of the product [2]. The risk testing before launch and feedback monitoring during operation further carry ethical review through the whole life cycle of the product [2].

5.3. Social synergy: public education and industry oversight as the core

Social coordination is needed to enhance public literacy through layered education and improve governance channels through industry supervision. Layered education to promote public AI ethical literacy needs to be designed for different groups: the student group focuses on the balance between reasonable use and independent learning; the middle-aged and elderly group focuses on data privacy training, including specific operations such as turning off unnecessary permissions and recognizing false AI information; and the workplace group focuses on strengthening algorithmic risk recognition. In the study of personal information protection of generative AI, Wang [5] points out that digital literacy cultivation needs to be combined with scenario-based needs, and the design of

educational content for different groups is precisely a response to scenario-based needs, avoiding the problem that a single educational content cannot be adapted to multiple groups. Diversified education channels are also needed: communities can carry out offline practical training for the elderly, short video platforms can enhance the promotion of "AI privacy protection skills", and colleges and universities can set up "AI ethics general courses" to systematically explain theories and practices; the construction of diversified education channels can cover different groups. The construction of diversified education channels can cover the learning habits of different groups and improve the effect of education.

The collaborative monitoring system within the industry must establish a dual framework comprising ethical certification and complaint platforms. Industry associations should develop ethical certification standards for AI products and issue corresponding logos to those that comply with requirements for technical transparency and data protection. This will enable the public to easily identify compliant products through these logos. Concurrently, a unified ethical complaint platform should be created and managed by the industry association to accept public reports concerning privacy breaches and algorithmic bias. Companies must be required to respond within a specified timeframe, and those that fail to do so will be publicly identified. Zhou Hanhua [1] underscores in his research on data governance that enhancing channel protection is essential for social oversight, and the establishment of a unified complaint platform directly addresses this need. The Ethics Complaint Center, established by the Japanese AI industry association, has already enhanced supervisory efficiency through features such as online submission and progress tracking, which can serve as a practical reference for China.

6. Conclusions of the study

Based on the empirical data from 307 valid questionnaires, combined with the core academic research, this paper distills the core conclusions with empirical support and theoretical value from the three dimensions of ethical cognitive characteristics, shortcomings of governance reality, and the effectiveness of multiple solutions.

6.1. Structured characteristics of AI ethical cognition

The public's perception of AI ethical risks presents the structural characteristics of "gradient, differentiation and diversification". From the perspective of risk perception, combining the data in Table 1, data privacy leakage and algorithmic bias become the core concerns because these risks directly harm personal rights and interests; while the concerns about the decline of creativity due to the ambiguity of intellectual property rights of AI-generated content and over-reliance on AI-generated content are relatively low because the former mostly involves the copyright disputes between enterprises, and the latter has a long-term implicit impact, which makes it difficult to realize the serious consequences in a short period of time. In terms of group cognition, the high concern about algorithmic bias among the 26-35 year-old workplace group, the importance of data privacy among users in the education industry, and the more comprehensive risk perception of high-frequency users all reflect the influence of usage scenarios and technical literacy on cognition. In terms of governance needs, the data in Table 2 shows that 37.13% of respondents choose enterprise self-regulation, 36.81% support industry standards, and only 28.01% expect government legislation, and this preference distribution is adapted to the fast iterative nature of AI technology, and Cao Jianfeng [3] mentions in his study of credible AI governance, "Pluralistic governance is better

adapted to the rapid change of technology ", also provides theoretical support for this demand preference.

6.2. AI ethics governance shortcomings

The shortcomings of the current AI ethical governance form a direct correlation with the public perception pain points. At the technical level, 82% of respondents are not clear about the basis of AI decision-making, and 68% of respondents have had their data collected without their knowledge, which directly points to the problems of insufficient algorithmic transparency and weak data protection, as well as the "uncontrollable risk due to the non-explainability of large models" analyzed in the study of generative AI and the "loss of control of data usage rights" [1,3], both point to the core harm of such technical shortcomings. Zhou [1] emphasizes "uncontrolled data access", both pointing out the core harm of such technical shortcomings. At the enterprise level, less than half of AI enterprises have made public their ethical guidelines, and 62% of respondents believe that their products have not undergone ethical testing before going online, reflecting the formalization of ethical guidelines and the lack of review, and the neglect of this bottom line by enterprises is an important reason for the lack of public trust in corporate self-discipline. At the social level, only 28.01% of the respondents can distinguish between the reasonable use and abuse of AI, and 19.54% know the channels for ethical complaints, reflecting the problem of uneven public literacy and insufficient supervision channels.

6.3. Multiple solution

The multifaceted governance program constructed on the basis of empirical evidence and theory can effectively respond to the cognitive pain points and governance shortcomings. In the technical solution, the algorithm hierarchical interpretation mechanism solves the black box problem of algorithms by adapting to different user perceptions, and the data dynamic authorization mechanism solves the problem of data loss of control by users controlling the right of use, which are designed to meet the public's demand for transparency and controllability. In the enterprise program, the ethical guidelines covering data, algorithms and scenarios and the full-process review mechanism throughout the R&D, on-line, and operational processes make up for the shortcomings of insufficient self-discipline of the enterprise, and the "legitimacy review needs to be carried out throughout the whole process" mentioned by Yao Jia [2] in her study on training data also provides the theoretical basis for the design of the review mechanism, ensuring that corporate ethics governance moves from form to substance. In the social program, layered education improves public literacy and industry supervision improves channels, solving the problems of weak literacy and lack of supervision. The synergy of the three can realize the benign interaction between "risk prevention and control, enterprise self-regulation and public participation", and find a dynamic balance between technological innovation and ethical safety.

6.4. Research limitations and future perspectives

There are two limitations in this study that need to be improved in subsequent studies. First, the sample coverage needs to be expanded. Currently, 80% of the samples are concentrated in Jiangxi, Shandong, and Guangdong provinces, and there is a lack of coverage in the central and western parts of China, third- and fourth-tier cities, and rural areas, and there may be a difference between the level of development of digital intelligence and the public's cognition in these regions. In the future,

we need to expand the sample to the whole country, include more regional groups, analyze the impact of regional culture and economic development on ethical cognition, and verify whether the "digital divide" has exacerbated cognitive differentiation. In the future, it is necessary to expand the sample to include more regional groups, analyze the impact of regional culture and economic development on ethical cognition, and verify whether the "digital divide" exacerbates cognitive differentiation. Second, the study focuses on general AI ethics, but does not analyze specific fields such as healthcare, education, finance, etc. The ethical risks faced by AI applications in different fields are different in different scenarios, so we can carry out a special study on specific fields to propose more precise solutions for the industry.

With the continuous iteration of AI technology, new forms of ethical issues may emerge, and it is necessary to continuously track the changes in public perception and dynamically optimize the governance scheme, to ultimately achieve the goal of "technology serves people rather than triggering risks".

References

- [1] ZHOU, H. H. (2023). Misunderstandings of data ownership confirmation. *Chinese Journal of Law*, 45(2), 1-26.
- [2] YAO, J. (2024). The training data system of artificial intelligence: From the perspective of "intelligent emergence". *Guizhou Social Sciences*, (2), 51-57.
- [3] CAO, J. F. (2023). Toward trustworthy AI: Governance challenges and responses to ChatGPT-like generative artificial intelligence. *Journal of Shanghai University of Political Science & Law (The Rule of Law Forum)*, 38(4), 28-42.
- [4] JIANG, X. J. (2025). Order reconstruction and governance cooperation in the digital-intelligent era: Dual goals of rationality and consensus. *Management World*, (5), 1-15.
- [5] WANG, S. A. (2024). Research on personal information protection in the context of generative artificial intelligence. *Network Security Technology & Application*, (7), 121-124.