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The Role of Fair Competition Legislation Balanced against Internet Platform Interface Control: The Case of Cross-Platform Automated Implementation of Intelligent Automated Agents

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Abstract

Generative artificial intelligence continues developing more sophisticated applications, including automated intelligent agents. Their implementation, however, is overseen and restricted by Internet platforms through interface rules, identity authentication, and risk control measures, all of which limit the cross-platform execution of said agents. This impacts their competitive application across business sectors, and limits consumer choices. This paper, based on the Competition Fairness Protection Law of The People's Republic of China, analyzes the potential impact of such controls on the competitiveness of intelligent automated agents in order to determine their legality or lack thereof. It uses a three-tier framework focusing on legitimacy of purpose, necessity of means, and balance of effects, to assess and balance platform governance needs together with the protection of fair competition.

Keywords

Intelligent agents; cross-platform automated execution; fair competition; platform interface control; principle of proportionality

1. Introduction

Generative artificial intelligence (AI) continues its technological evolution, and it is now capable of functioning as discrete intelligence agents that are able to plan tasks and utilize software tools directly. Their functionality has therefore expanded to more than content generation and toward cross-platform automated execution. Intelligent agents can, through application programming interface (API) interconnectivity, utilize standard protocols, interact with graphical user interfaces (GUIs), and perform information retrieval, execute transactions, and perform different services for users through methods that go beyond simulation. However,

these functions are restricted by platforms, which resort to measures such as rules for interface interaction, identity authentication, and the implementation of risk control mechanisms. This raises a regulatory conflict between user authorization and platform governance, bringing into question whether platforms' restrictions and controls exceed the scope of reasonable governance or affect the order of fair competition concerning the usage of AI agents.

The problem already exists in practice. Amazon has started litigation on one such case, indicating that determining the lawful extent of platform control is imperative. Since the cross-platform execution behavior of intelligent agents involves both user authorization and the business activities with which the agent interacts, it is challenging to evaluate when agents should act with few restrictions based solely on the user authorization or the principle of technological neutrality.

Existing research primarily focuses on data competition, interface openness, and platform governance. However, systematic research on the law governing competition in the case of controls applied to cross-platform agent execution scenarios remains lacking. Therefore, this paper utilizes the Competition Fairness Protection Law of The People's Republic of China, hereafter referred to as CFPL, to analyze the impact of platform interface control (PIC) behavior on competition conditions. It aims to construct a three-tier framework involving the stages of legitimacy of purpose, necessity of means and balance of effects, to create an analytical structure through which to balance platform competition with the capabilities of intelligent agents.

2. The Competitive Impact of Platform Interface Control Behavior

Within the context of competition law, cross-platform automated implementation of intelligent agents must not be judged solely on the formal basis of pre-existing user authorization, but should also be analyzed through the effects of the impact of PIC behavior on the competitive context of the situation as a whole. The core issue is determining whether platform controls affect the competitive order, negatively impact market participation opportunities, or weaken the competitive capabilities of other operators.

This structural competition evaluation can be subdivided into three tiers.

First, it must be determined whether the competitive structure has been affected. If the platform has adequate API permissions, additional data restrictions or risk control mechanisms can alter the way intelligent agents connect with platform service, which would constitute a negative impact on the competitive order.

Second, the competitive conditions for competitive entry must be evaluated to see if they have changed because of these controls. Whether the platform has increased the difficulty for external operators or intelligent agents to access its ecosystem must be determined. This could have been performed by raising API call costs or restricting access permissions, thus creating unreasonable barriers to competition.

Third, competitiveness must be analyzed to see if it has been weakened. Platforms may, through interface controls, cause external intelligent agents for service providers to be disadvantaged in terms of functionality, service efficiency, or user experience, which can reduce their ability to compete.

These three tiers constitute the competitive impact identification path in the cross-section platform automated execution scenario of intelligent agents. The focus is not on judging whether platforms are formally compliant, but in analyzing whether platform technical control measures alter competitive conditions or damage the fair competition order.

3. Evaluation of Platform Interface Control under CFPL

3.1. Applicable Basis

The CFPL regulates business practices that disrupt fair competition, not the market structure itself. Therefore, the key to determining whether PIC falls under competition law evaluation lies in whether the controls interfere with normal business activities of other operators through technical measures.

Article 13 of the CFPL considers data, algorithms, and technical measures within its regulatory scope, prohibiting operators from unfairly hindering the normal operation of other operators' legitimate provision of better products or services. This provides a direct regulatory basis for controls. Article 2, meanwhile, specifies that disrupting market competition order, harming the legitimate rights and interests of other operators or consumers, and violating business ethics are all criteria for legal indictment, providing the basis for the oversight and protection of cross-platform implementation of intelligent agents.

Hence, in scenarios involving these implementations, if controls interfere with other operators' provision of products and services and disrupt fair competition, this is grounds for including them in the evaluation scope of the CFPL. Articles 2 and 13 form a normative basis applied to controls.

3.2. Assessment of Illegality

After confirming that PIC behaviors fall under the CFPL, it is necessary to determine under what conditions these controls constitute illegal behavior. Platform interface management solely targeting network security, system stability, and data security falls within its legal operational autonomy and does not constitute unfair competition. Illegality should be judged in conjunction with articles 2 and 13 of the CFPL, by asking certain questions.

First, does platform control hinder the normal operation of other operators' legitimate provision of network products and services?

If platforms use practices to unreasonably restrict other operators from legally providing network products and services, this could constitute hindering normal operations as stipulated in Article 13. Conversely, necessary restrictions

implemented for legitimate purposes such as network security and system stability are generally not considered illegal.

Second, does platform control violate the principles of good faith and generally accepted business ethics?

For PIC behaviors not explicitly covered by Article 13, further evaluation should be conducted in accordance with Article 2 of the CFPL. The key considerations are whether the PIC has a legitimate business purpose, whether its technical measures exceed the necessary scope for maintaining network security and system governance, and whether it unreasonably restricts others.

Article 13, as a typological standard, should be applied primarily to PIC behaviors that meet its constituent elements; Article 2, as a general clause, provides supplementary evaluation criteria for new types of digital competition behaviors.

4. A Three-Tier Proportional Review Framework

An assessment of illegality does not automatically mean that PIC constitutes unfair competition. Digital platforms have reasonable operational and management responsibilities in maintaining system security, protecting user rights, and ensuring stable service operation. Therefore, after confirming that PIC falls within the scope of the CFPL, a proportional review is still needed to determine whether restrictive measures are needed and reasonable.

The three-tier review framework that integrates legitimacy of purpose, necessity of means, and balance of effects is ideal for this purpose. Shi Xinyuan states that the principle of proportionality typically includes four levels: legitimacy of purpose, appropriateness, necessity, and balance. However, in the context of PIC, there is a significant overlap between appropriateness and the necessity of the means. Therefore, this paper incorporates them into the preceding and following stages to form a three-tiered structure that is more in line with the evaluation of competition law.

4.1. Legitimacy of Purpose

The legitimacy of purpose review aims to determine whether the platform's interface control behavior has a reasonable business purpose. It is the basis for judging whether there is preliminary legitimacy since, as market operators, digital platforms manage the scope of interface access, access permissions, and invocation methods to maintain platform operation order, ensure service quality, and reduce technical risks.

Specifically, legitimate purposes mainly include: Data security protection; user privacy protection; system stability maintenance. The above purposes collectively constitute the legitimate basis for the platform's implementation of interface control measures. However, this legitimacy only serves as grounds for "entry into review" and does not automatically imply that the restrictive measures are legal under

competition law. This review approach is similar to the AI management governance principles of risk identification, system objectives, and risk control. At the same time, an intelligent agent governance framework can reduce the operational risks of intelligent agents through technical control and access control, and also provides a reasonable basis for the platform to implement interface restrictions based on security objectives.

4.2. Review of the Necessity of Means

This review aims to determine whether PIC measures constitute the minimum necessary means to achieve their intended purpose. In the context of digital platform governance, it has been pointed out that while algorithms and data-driven mechanisms improve market efficiency, they may also enhance market transparency and feedback speed, thereby reinforcing the convergence of behaviors among market participants and potentially exacerbating the risk of weakened market coordination and competition under certain conditions. Therefore, the rationality of platform technical measures cannot be judged solely by their governance effectiveness; it also needs to be examined in conjunction with their impact on the competitive structure. The EU Digital Markets Act, for instance, by imposing behavioral obligations on "gatekeepers," limits these obligations and their enforcement measures to what is necessary to achieve the dual objectives of fairness and contestability.

A necessity of means review helps prevent platforms from expanding their control through technical rules, and further, by leveraging tiered access control and pre-design mechanisms, it enables differentiated management of risks in intelligent agent systems, thereby achieving a balance between system security and reasonable openness. This approach essentially embodies the technical expression of the principle of minimal intervention. Furthermore, it is crucial to ensure that different levels of risk require corresponding levels of control measures to avoid over- or under-control.

Therefore, the key to this review lies not in whether platform measures can achieve governance objectives, but in whether they have reached the minimum level of constraints required to achieve those objectives. Relevant interface-control measures are justifiable under competition law, certainly, but only where no equally effective alternative exists that would cause less harm to competition.

4.3. Review of the Balance of Effects

The balance of effects review aims to assess whether the governance benefits and competitive harms resulting from PIC measures are reasonably balanced, focusing on whether platform behavior exceeds the reasonable competition boundaries permitted by the CFPL due to excessive restrictions. This stage focuses not on the effectiveness of platform measures, but on whether, while achieving goals such as

security and stability, they unduly impact the participation of other businesses in competition.

Specifically, three aspects should be examined:

1. Does the platform's interface control unduly weaken the ability to participate in competition? This asks whether the platform's interface controls hinder external business operators or intelligent agents to access or use the relevant services normally, thereby impairing their opportunities to compete in the market.

2. Does it improperly alter the conditions of competition? This concerns whether the platform changes the basis for fair competition among market participants through interface rules, access permissions, or technical restrictions, thereby securing an unjustified competitive advantage for itself.

3. Does it result in excessive restriction? If the technical or regulatory measures adopted by the platform go beyond what is necessary to achieve objectives relating to security, privacy, or system stability, then this means the platforms are imposing unnecessary additional constraints on market participants.

While algorithms and data-driven technologies improve efficiency, they may also influence the competitive process through technological control. Algorithmic mechanisms may change the way competition interacts by increasing information processing speed and market feedback frequency. In generative AI scenarios, the concentration of key technological resources and interface control capabilities may also affect the conditions under which other operators gain competitive opportunities. Therefore, the platform's interface control behavior needs to be further evaluated under competition law.

The core of the effectiveness balance review lies in determining whether the platform maintains an appropriate balance between reasonable governance needs and fair competition protection, preventing operators from using technological control capabilities to engage in unfair competition under the guise of security governance.

5. Conclusion

In cross-platform automated execution scenarios for intelligent agents, PIC behaviors may affect the competitive opportunities and participation conditions of other operators. This paper, based on the framework of the CFPL, analyzes the competitive impact of PIC behaviors and proposes an identification path that determines legality through analyzing a change in competitive structure, competitive conditions, or a weakening of competitive capabilities as a result of platform regulation. Upon the determination of illegality, a dual evaluation system of "impeding normal operation" and "violating business ethics" is constructed, and a three-tiered proportional review framework involving legitimacy of purpose, necessity of means, and balance of effect" is introduced to determine whether platform technical control behaviors exceed the scope of fair competition.

This paper shifts its analytical focus from user authorization and access control to evaluating the impact of competition, providing an analytical approach for the application of fairness in competition laws applied to cross-platform implementation scenarios of intelligent agents. However, this paper also has certain limitations: intelligent agent technology is still under development, the competitive impact of different interface control methods requires further research, and relevant judgment criteria need to be continuously improved through practical application.

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