ARTIFICIAL INTELLIGENCE AND COMPETITION LAW: EMERGING CHALLENGES IN DIGITAL MARKETS

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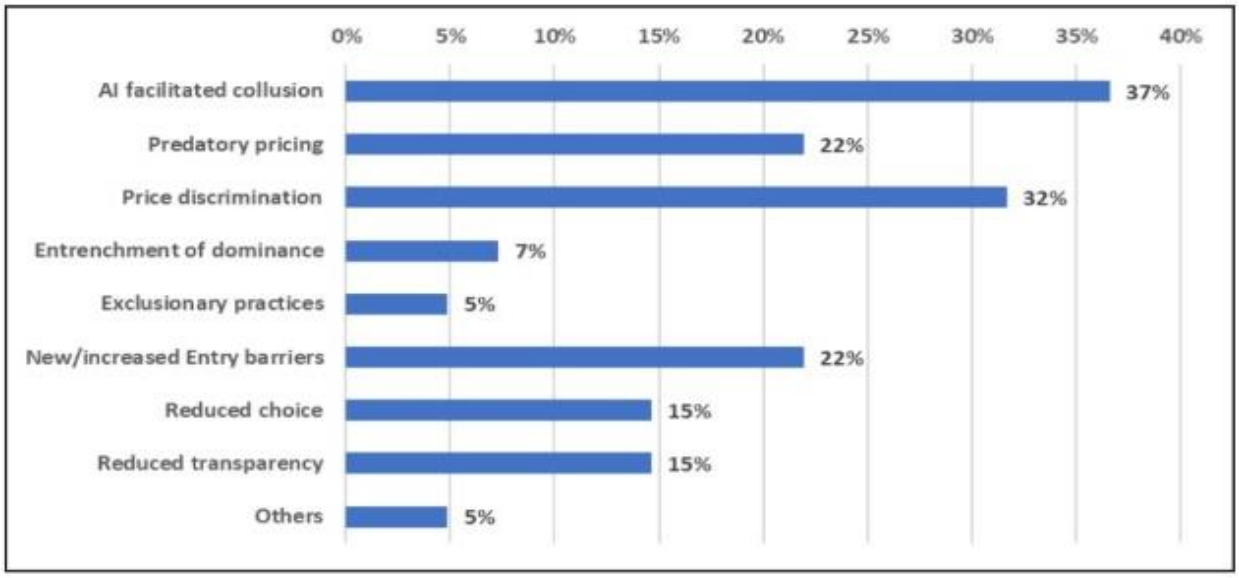
ABSTRACT

The rapid integration of artificial intelligence (AI) into digital markets has significantly transformed the nature of competition. While AI has the potential to enhance efficiency, improve consumer services, and facilitate innovation, it simultaneously raises complex competition law concerns. The growing reliance on algorithmic decision-making has introduced new risks such as algorithmic collusion, personalized price discrimination, predatory pricing and increased entry barriers. These developments challenge traditional competition law frameworks that were primarily designed to address human-driven conduct and explicit agreements between firms. A recent market study conducted by the Competition Commission of India in collaboration with Management Development Institute Gurgaon highlights the major competition concerns arising from AI adoption in India. According to the study, AI-facilitated collusion and price discrimination represent the most significant perceived risks in AI-driven markets. The increasing reliance on data, advanced computing infrastructure and network effects has also strengthened the market power of large technology firms, creating structural barriers for new entrants. In addition, opaque algorithmic systems may reduce transparency and consumer choice, thereby exacerbating information asymmetries between firms and consumers. These developments suggest that competition authorities must reconsider the adequacy of existing legal standards in addressing algorithm-driven market behaviour. This paper examines the key competition concerns associated with AI adoption, analyses their implications from a law-and-economics perspective and discusses the regulatory challenges faced by competition authorities. It argues that while AI can enhance market efficiency, it also necessitates evolving regulatory approaches to ensure fair competition, consumer welfare and accountability in digital markets.

Key Words: *- Artificial Intelligence, Competition Law; Algorithmic Collusion, Price Discrimination, Digital Markets.*

AI AND COMPETITION

In a recent *Market Study on Artificial Intelligence and Competition* conducted by the Competition Commission of India in collaboration with Management Development Institute Gurgaon (September 2025), several competition issues arising from the adoption of artificial intelligence were analysed. These include AI-facilitated collusion, price discrimination, increased entry barriers, predatory pricing, reduced consumer choice and reduced transparency. The study also identifies concerns relating to entrenchment of dominance and exclusionary practices.



Source: Market Study On Artificial Intelligence And Competition by Competition Commission of India,2025.

The graph presents perceived competition concerns in the AI industry ranked by percentage of respondents. The highest level of concern relates to AI-facilitated collusion, reported by approximately 37% of respondents. This refers to the ability of algorithms to coordinate prices without explicit agreements between firms. From a law-and-economics perspective, this presents a significant challenge because traditional antitrust doctrine relies heavily on proof of

communication or coordinated intent between firms. If algorithms independently learn strategies that avoid aggressive price competition, enforcement agencies may find it difficult to apply existing legal standards designed to detect collusion. Scholars have argued that such developments may undermine the effectiveness of traditional antitrust doctrines that are primarily based on human conduct and intentional coordination.[1]

The second major concern identified in the study is price discrimination, recorded at 32%. Artificial intelligence enables firms to analyse large volumes of consumer data and estimate an individual customer's willingness to pay. This allows companies to implement highly personalised pricing strategies. From an economic perspective, price discrimination may increase efficiency by expanding output and allowing firms to serve consumers with different price sensitivities. However, it may also reduce consumer surplus if firms capture a greater share of the economic benefits by charging higher prices to certain consumers.[2] In digital markets where firms possess extensive consumer data, personalised pricing may significantly shift bargaining power in favour of companies.

Mid-level concerns include predatory pricing and new or increased entry barriers, each standing at 22%. Predatory pricing in AI markets may occur more easily because large technology firms possess considerable advantages, including vast datasets, strong financial resources and integrated digital ecosystems such as cloud computing infrastructure and AI development platforms. These advantages enable dominant firms to sustain lower prices for extended periods, potentially forcing smaller competitors out of the market.

Entry barriers in AI markets are also particularly significant. Developing advanced AI systems requires expensive computing infrastructure, specialised technical expertise and access to large datasets, many of which are proprietary. Large firms also benefit from network effects, where the value and efficiency of their services increase with the number of users. Consequently, established firms may strengthen their market position over time, making it difficult for new entrants to compete effectively and potentially leading to concentrated digital markets dominated by a few major firms.[3]

Other concerns identified in the study include reduced consumer choice and reduced transparency, each cited by 15% of respondents. These issues extend beyond traditional competition law and intersect with consumer protection and regulatory governance. Algorithmic decision-making systems often operate as opaque "black boxes", making it difficult for consumers and regulators to understand how pricing decisions and market outcomes are determined. Such opacity can create information asymmetries that disadvantage consumers and smaller firms. Scholars have therefore emphasised the importance of algorithmic transparency and explainability in maintaining competitive and fair digital markets.[4]

Interestingly, more traditional antitrust concerns such as entrenchment of dominance (7%) and exclusionary practices (5%) rank lower compared to algorithm-driven risks. This suggests a shift in focus from classic structural market power issues toward concerns about how algorithms themselves shape competitive behaviour.

Overall, the findings indicate that policymakers increasingly view artificial intelligence not merely as a factor contributing to market concentration but as a transformative force that alters the mechanisms of competition through data-driven coordination, personalised pricing and algorithmic market control.

CONCLUSION

The increasing integration of artificial intelligence into digital markets has fundamentally altered the competitive landscape. While AI technologies can generate efficiencies, enhance innovation and improve consumer experiences, they also introduce new challenges for competition law enforcement. Algorithmic collusion, personalised pricing and data-driven entry barriers illustrate how AI may influence market behaviour in ways that traditional antitrust frameworks were not originally designed to address.

The findings of the market study conducted by the Competition Commission of India indicate that policymakers are increasingly concerned with algorithm-driven competition risks rather than focusing solely on traditional structural indicators of market power. Addressing these challenges will require the development of new regulatory tools and analytical frameworks, including

greater scrutiny of algorithmic pricing systems and improved regulatory access to digital market data.

Ultimately, competition policy in the era of artificial intelligence must ensure that technological innovation promotes dynamic and competitive markets rather than reinforcing concentrated economic power.

References

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