
ALGORITHMIC COLLUSION AND CCI'S WAKE-UP CALL IN THE 2025 REPORT

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ABSTRACT

Artificial intelligence-driven pricing algorithms are transforming competition law enforcement by enabling collusive outcomes without human communication or explicit agreement. This article examines "algorithmic collusion" through the lens of the Competition Commission of India's (CCI) September 2025 Market Study on Artificial Intelligence and Competition, in which 37% of AI-using start-ups identified algorithmic collusion as their foremost competitive risk. Drawing on the CCI's four-fold taxonomy of collusion-prone algorithms and the OECD's October 2025 report on algorithmic pricing across G7 jurisdictions, the article analyzes how self-learning and signaling algorithms can produce a "black-box" problem that undermines the "meeting of minds" requirement central to Section 3 of the Competition Act, 2002. It evaluates India's regulatory trajectory—including the *Samir Agrawal v. ANI Technologies* precedent and the 2023 hub-and-spoke amendments—and critiques the CCI's proposed self-audit framework as a light-touch response. The article argues that meaningful enforcement powers and technical capacity-building are essential to prevent undetectable, algorithmically stable cartels.

Introduction

Let us imagine an instance where two major players in ride-hailing or e-commerce do not communicate with each other through emails or meetings but price their goods at above market rates every single day. They are using AI based pricing algorithms that have learned to cooperate and generate more profit when they collaborate instead of compete. This illustration shows what the concept of “algorithmic collusion” means, which has changed the way competition authorities around the world enforce cartel laws.

In September, 2025, the Competition Commission of India (CCI), conducted a Market Study on Artificial Intelligence and Competition¹. According to the study, one-third (37%) of all start-up respondents who use artificial intelligence for competitive purposes cited "artificial intelligence facilitated collusion" as their number one competitive risk concern, greater than any other competitive risk concern. Because there will be increased use of AI in the marketplace, there is a growing need for competition authority regulators to develop new methods of enforcing the provisions of the Competition Act 2002², particularly because these mechanisms may be insufficient against sophisticated pricing algorithms that create collusive effects without human intervention.

This article describes the process of creating collusive conditions through algorithms; the findings of both the CCI's study in 2025 and the OECD's October 2025³ report about collusion using AI in G7 countries; the legal issues associated with section 3⁴ violations of the act; and a possible method of addressing these issues via a self-audit mechanism recommended by the CCI.

Understanding Algorithmic Collusion

To form traditional cartels which set prices, divide markets, or limit output, people need to work together through clear agreements, messages, or signals. Algorithmic collusion changes this by using AI-powered pricing systems that can keep an eye on competitors, change prices on the fly, and even learn how to work together on their own in some cases. The CCI's 2025

¹ Competition Commission of India, *Market Study on Artificial Intelligence and Competition* (2025), <https://www.cci.gov.in/economics-research/market-studies/details/47/0>.

² The Competition Act, 2002

³ OECD, *Algorithmic Pricing and Competition in G7 Jurisdictions: Emerging Trends and Responses* (2025), <https://doi.org/10.1787/f36dacf8-en>.

⁴ Competition Act, 2002, No. 12 of 2003, § 3 (India).

study divides pricing algorithms that make collusion more likely into four groups:

- Algorithms that keep an eye on competitors' prices all the time and quickly respond to keep prices from going too high.
- Parallel or hub-and-spoke algorithms, where several companies use the same third-party pricing tool, which causes indirect coordination.
- Signaling algorithms that post information in public to test and help with tacit alignment.
- Self-learning (reinforcement learning) algorithms systems which evolve on their own, finding collusive equilibria just by trying to make the most money, even when they don't mean to.

The study says that self-learning algorithms "may not have been designed to achieve collusion, but they may still reach collusive outcomes on their own." This creates a "black-box" problem: coordination comes from code that isn't clear, and there isn't any obvious "meeting of minds," which makes the erstwhile investigative methods less useful.

In India, these kinds of risks are common in industries where prices change often, like ride-hailing, e-commerce, quick commerce, and retail. The study shows that dynamic and personalized pricing tools are already widely used, which makes it more likely that they will lead to unintended collusion.

Global Context from the OECD Report

The OECD's report from October 2025 on Algorithmic Pricing and Competition in G7 Jurisdictions talks about three main ways that algorithms can make collusion easier :

- Clear automation of human agreements makes it easier to keep an eye on things and less cheating.
- Unspoken coordination through shared platforms or the exchange of data in real time.
- Self-learning systems that are completely independent and try out different collusive strategies before picking the best one without any help from people.

According to the OECD, algorithms that use AI can make collusion more stable and harder to find. Black-box opacity and quick, small price changes can hide patterns that enforcers usually look for. Machines don't get tired or emotional. There have been cases in the US involving rental pricing software, and there have been investigations in Europe into algorithmic retail price maintenance. These show that current laws worldwide can deal with clear cases of collusion or hub-and-spoke situations, but autonomous algorithmic collusion is often in a grey area.

The OECD report says that competition authorities need to improve their technical skills, look into new ways to audit, and encourage compliance "by design" instead of quickly making new rules that apply to everyone.

India's Regulatory Journey and the 2025 CCI Study

The CCI looked into Ola and Uber's dynamic pricing in the case of *Samir Agrawal v. ANI Technologies* (2019)⁵, but they didn't find any evidence of a "agreement" between drivers or the platform that forced a common algorithm. Similar investigations into early airline pricing problems did not find proof of collusion without clear coordination.

The AI Market Study from October 2025 is of much significance. Along with the 37% figure on fears of collusion, it lists other risks, like price discrimination (cited by 32% of respondents), and talks about how AI can make data, computing power, and talent more concentrated. The study examines the AI value chain and cautions that self-learning and signaling algorithms may produce coordinated outcomes that are challenging to differentiate from legitimate competitive conduct.

It also stipulates that the 2023 amendments to the Competition Act made hub-and-spoke arrangements more liable by going after facilitators. But these changes don't completely fix the problems that fully autonomous self-learning systems cause.

Legal Challenges Under Section 3 of the Competition Act

Section 3⁶ says that agreements or concerted actions that have or are likely to have a big

⁵ *Samir Agrawal v. ANI Techs. Pvt. Ltd.*, Case No. 37 of 2018, Competition Comm'n of India (Nov. 6, 2018), <https://www.cci.gov.in/antitrust/orders/details/228/0>.

⁶ Competition Act, 2002, No. 12 of 2003, § 3 (India).

negative effect on competition (AAEC) are not allowed. For hard-core cartels, harm is assumed. The challenge of algorithmic collusion is in proving that there is a "agreement" or "arrangement" when machines learn on their own and there is no communication between people.

Self-learning algorithms pose a challenge to the fundamental "meeting of minds" criterion. Sustained price parallelism, though indicative, has never been adequate by itself to establish a violation under Indian law. The OECD report backs up this problem with enforcement by saying that traditional tools don't work well when there isn't a paper trail or clear intent.

This gap makes us wonder if a more effects-based analysis, which looks at market outcomes like less competition and harm to consumers, should play a bigger role. It also makes us wonder if Indian enforcers need better technical forensics to look at how algorithms are made, what they take in, and what they put out.

CCI's Proposed Solution: The Self-Audit Framework

The CCI's study takes a measured, light-touch approach instead of calling for strict rules right away. A Guidance Note on Self-Audits is at the heart of its recommendations. It tells businesses that use AI pricing systems to :

- Clearly write down the goals, data inputs, design choices, and testing procedures for their algorithms.
- Check systems for unintended collusive risks at the development, deployment, and update stages.
- Do regular internal audits of outputs and effects on the market that can be seen.
- Put in place protections to stop the sharing of sensitive competitor information that isn't appropriate.

The study suggests that real self-audits can create a culture of compliance and may be looked at favourably in any future enforcement situation. It also calls for the CCI to build its capacity, AI decision-making to be more open, and more cooperation between countries. This framework aims to balance innovation with competition safeguards, contrasting with more interventionist

approaches being explored in some jurisdictions.

The Way Ahead

The self-audit system as recommended by CCI is a good start because it makes businesses responsible for designing and keeping an eye on AI systems in a responsible way. But for it to be effective, there need to be clear standards for what makes a good audit, and the CCI needs to be able to check compliance and gain technical knowledge.

As India's digital economy grows, algorithmic pricing will be used more and more in areas like e-commerce and mobility. Black-box systems that aren't watched by regulatory authorities could lead to stable but undetectable collusion, which could appreciable adverse effect on competition and lead to higher prices and poor services for consumers who are price sensitive.

The CCI's study found that 37% of AI startups were most worried about algorithmic collusion. The study also mapped out the problems caused by self-learning algorithms. India is at a crossroads: it can either give the self-audit system real enforcement powers or accept that black-box algorithms will keep making stable, undetectable cartels which the traditional Section 3 governance cannot reach.