



The Indian Journal for Research in Law and Management

Open Access Law Journal – Copyright © 2026

Editor-in-Chief – Dr. Muktai Deb Chavan; Publisher – Alden Vas; ISSN: 2583-9896

This is an Open Access article distributed under the terms of the Creative Commons Attribution-Non-Commercial-Share Alike 4.0 International (CC-BY-NC-SA 4.0) License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium provided the original work is properly cited.

FROM FACILITATION TO COLLUSION: RETHINKING HUB-AND-SPOKE ARRANGEMENTS UNDER SECTION 3 OF THE COMPETITION ACT 2002

~ Harsh Jain & Mumal Singh

Abstract

*Hub-and-spoke arrangements present a fundamental challenge for competition law: how can a horizontal cartel be established when competing firms, the spokes never communicate directly? The Competition (Amendment) Act 2023 addressed one side of this problem by inserting a proviso to Section 3(3) that extends liability to intermediaries facilitating such arrangements. Yet it left unresolved the more fundamental question of what establishes the necessary connection, the “rim”, between the spokes themselves. This article identifies this unresolved issue as the **rim deficit** and argues that it, rather than the treatment of the hub, will determine the effectiveness of Indian enforcement against hub-and-spoke arrangements. Drawing on Indian jurisprudence, including the Competition Commission of India’s July 2026 orders concerning HP India, and comparative developments in the United States, European Union, and United Kingdom, the article develops a Facilitation-Collusion Continuum and proposes a two-stage, five-factor test to distinguish proof of the rim from attribution of liability to the hub. It then applies the framework to algorithmic markets, addresses potential objections, and proposes enforcement guidance to give the 2023 proviso coherent and workable content.*

Keywords: Hub-and-spoke cartels; Competition Act 2002; section 3(3); concerted practice; information exchange; digital platforms; algorithmic pricing; leniency

I. Introduction

The classic cartel is a conversation. Competitors meet, agree on a price or divide customers, and the regulator’s task is to find evidence of the meeting. Hub-and-spoke arrangements

dispense with the conversation. A common counterparty, whether a distributor, a trade association, a marketplace or a software provider, carries information or assurances from one competitor to another, so that each can behave as though it had agreed with the rest without ever speaking to them.¹ The harm to consumers is that of an ordinary cartel. The evidence is not.

The difficulty is that intermediaries lawfully touch many competitors. A distributor serves several manufacturers; a platform serves thousands of rival sellers; an association publishes industry statistics. Each interaction is, taken alone, unremarkable. Competition law must therefore identify the point at which a series of lawful vertical exchanges becomes evidence of one unlawful horizontal understanding.

Indian law long lacked an express answer. Section 3(3) of the Competition Act 2002 presumes an appreciable adverse effect on competition (AAEC) from specified agreements between enterprises ‘engaged in identical or similar trade’, which a distributor or platform, by definition, is not.² The Competition (Amendment) Act 2023, in force from May 2023, responded by adding a proviso under which a non-competing enterprise is presumed to be part of a section 3(3) agreement if it ‘participates or intends to participate in the furtherance of such agreement’.³

This article advances a narrow but, it is submitted, consequential claim. The proviso solves a problem of *attribution*, namely who may be treated as a party to a cartel. It does not solve a problem of *existence*, namely whether a cartel exists at all when its members never communicated. If there is no agreement among the spokes, there is nothing in whose furtherance the hub can participate. The missing element, the evidential link between the spokes that American courts call the ‘rim’, is the true battleground, and Indian law has not yet said how it is to be proved. This is termed here the *rim deficit*.

Three questions follow. First, what must be shown to infer a horizontal agreement from vertical interactions with a common intermediary? Second, what mental state must be proved of spokes and hub respectively? Third, can the answers be sustained in digital markets, where the hub may be an algorithm? The analysis is doctrinal and comparative. It draws on decisions of the Competition Commission of India (CCI) and the appellate authorities, including the Commission’s July 2026 HP India orders, and on United States, European Union and United

¹ OECD, ‘Hub-and-Spoke Arrangements: Background Note by the Secretariat’ (DAF/COMP(2019)14, 25 November 2019).

² Competition Act 2002 (India), s 3(3).

³ Competition Act 2002, s 3(3), second proviso, inserted by the Competition (Amendment) Act 2023.

Kingdom authority, each of which has confronted the rim problem directly. It also challenges the Commission's insistence, in the platform cases, on a 'meeting of minds' among spokes.

II. Conceptual Framework

A hub-and-spoke arrangement has three elements. The *hub* is the common intermediary. The *spokes* are the competitors that deal with it. The *rim* is the horizontal understanding among the spokes that completes the wheel. The image comes from United States conspiracy law, where the Supreme Court in *Kotteakos* treated a wheel without a rim as a set of separate conspiracies rather than one.⁴ The structure is dual: the observable relationships are vertical (hub to spoke), while the competitive harm is horizontal (spoke to spoke). The legal question is whether the second can be inferred from the first.

Four kinds of hub should be distinguished, because their incentives and the evidence against them differ. A *commercially interested hub*, such as a manufacturer that wants its resellers to stop discounting, benefits from suppressed inter-spoke rivalry. A *pure facilitator*, such as a consultancy, earns fees for organising coordination. An *association hub* collects and circulates member data. A *platform or algorithmic hub* mediates prices or ranks sellers at scale and earns commissions that may rise with higher prices. Hubs also differ in direction: a supplier may coordinate its resellers, as in the HP India orders discussed below, or a retailer its suppliers, as in *Toys 'R' Us*.

Conduct also falls into recognisable types: coordination of future prices, exchange of commercially sensitive information, resale price coordination, platform-mediated pricing and coordination of bids. All share a structure of at least two information flows, one from spoke A to the hub and another from the hub to spoke C.⁵ Where the flows are directed to a shared objective and known to the participants, they begin to look like a single arrangement; otherwise they remain ordinary business dealings.

III. The Indian Statutory Framework

Three provisions structure the analysis. Section 2(b) defines an 'agreement' to include any arrangement, understanding or action in concert, whether or not formal, written or intended to

⁴ *Kotteakos v United States* 328 US 750, 755 (1946).

⁵ On the A–B–C structure see Okeoghene Odudu, 'Indirect Information Exchange: The Constituent Elements of Hub and Spoke Collusion' (2011) 7 Eur Competition J 205. The conduct types track Competition Act 2002, s 3(3)(a)–(d).

be legally enforceable.⁶ Section 2(c) defines a ‘cartel’ as an association of producers, sellers, distributors, traders or service providers who, by agreement among themselves, limit, control or attempt to control production, distribution, sale or price.⁷ Section 3(3) then presumes AAEC for horizontal agreements of the listed kinds, while section 3(4) subjects vertical agreements, including resale price maintenance, to an effects-based assessment.⁸ Paragraphs (a) and (d) of section 3(3) reach conduct that ‘directly or indirectly’ determines prices or rigs bids, but the words qualify what an agreement does, not whether there is one.

The 2023 proviso has a traceable history. The Competition Law Review Committee identified the hub-and-spoke gap in 2019.⁹ The 2022 Bill proposed to catch an enterprise that ‘actively participates’ in the agreement; the Standing Committee on Finance accepted the objective but observed that the Bill gave no clarity on what active participation required.¹⁰ The enacted text is broader and disjunctive: participation or an intention to participate suffices. Three features of its drafting matter. First, it dispenses with the requirement that the hub operate in ‘identical or similar trade’, and extends to persons and associations of persons as well as enterprises. Second, the mental element lies in the second limb, which is undefined and which practitioners have already warned may be read to cover mere knowledge of, or inaction towards, a rim agreement.¹¹ Third, and most important for present purposes, the proviso presumes the hub to be part of ‘such agreement’. It presupposes, rather than establishes, an agreement among the spokes.

That presupposition has a further consequence. The proviso is drafted as a presumption, but its trigger and its conclusion nearly coincide: an enterprise that participates in the furtherance of an agreement is, in ordinary speech, already a participant in it. Read as an evidential presumption, the proviso does little work. It is better understood as a rule of attribution. It lifts the ‘identical or similar trade’ filter for the hub, and it allows the Commission to proceed against the hub on proof of participation or intention without showing that the hub itself ‘agreed’ with the spokes in the section 2(b) sense. The Commission must still prove the trigger,

⁶ Competition Act 2002, s 2(b).

⁷ Competition Act 2002, s 2(c).

⁸ Competition Act 2002, s 3(4); resale price maintenance is listed in s 3(4)(e).

⁹ Ministry of Corporate Affairs, *Report of the Competition Law Review Committee* (July 2019).

¹⁰ Competition (Amendment) Bill 2022 (as introduced), proposed amendment to s 3(3); Standing Committee on Finance, *Fifty-Second Report: The Competition (Amendment) Bill, 2022* (17th Lok Sabha, December 2022).

¹¹ AZB & Partners, ‘The Intent Dilemma in Hub and Spoke Offences’ (India Business Law Journal, 2025) <<https://law.asia/hub-spoke-cartel-liability/>> accessed 5 October 2026.

and it must still prove the rim. What shifts to the hub is the burden of displacing the presumed AAEC attaching to the agreement as a whole.

The presupposition also exposes a characterisation problem. Where the CCI has examined hub-and-spoke allegations, it has frequently analysed them as vertical restraints under section 3(4), asking whether resale price maintenance harmed competition, rather than as horizontal cartels under section 3(3).¹² The choice is decisive. Under section 3(3) the burden of rebuttal shifts to the defendants once the agreement is shown; under section 3(4) the Commission must prove harm. The only defensible threshold between the tracks is whether the evidence supports a horizontal understanding. That returns the inquiry to the rim.

IV. The Agreement Problem: Anatomy of the Rim

Section 2(b) is wide enough to capture tacit coordination. Its reference to an ‘understanding’ or ‘action in concert’ makes a signed contract unnecessary, and nothing in the text demands direct contact between the parties.¹³ The European authorities confirm the point. The Court of Justice treats a concerted practice as coordination that falls short of an agreement but knowingly substitutes practical cooperation for the risks of competition, an idea anchored in the principle that each operator must determine its market conduct independently.¹⁴

The harder question is the quality of the inference. ‘Action in concert’ cannot mean mere parallel action, because rational firms in concentrated markets often move together without agreement. The Supreme Court of India has accepted that an agreement may be inferred from circumstantial material on a preponderance of probabilities, but has also refused to treat parallelism in an oligopsonistic market as proof by itself.¹⁵ American law is more explicit: parallel conduct must be accompanied by ‘plus factors’ that tend to exclude independent decision-making, and an agreement requires evidence of a conscious commitment to a common scheme.¹⁶ The scholarship is unsettled on how much tacit coordination ‘agreement’ should

¹² *Fx Enterprise Solutions India Pvt Ltd v Hyundai Motor India Ltd* (CCI Case Nos 36 and 82 of 2014, 14 June 2017); *Jasper Infotech Pvt Ltd v Kaff Appliances (India) Pvt Ltd* (CCI Case No 61 of 2014, 15 January 2019).

¹³ Competition Act 2002 (n 6) s 2(b).

¹⁴ Case C-49/92 P *Commission v Anic Participazioni SpA* [1999] ECR I-4125, paras 115–16; Joined Cases 40/73 to 48/73, 50/73, 54/73 to 56/73, 111/73, 113/73 and 114/73 *Suiker Unie v Commission* [1975] ECR 1663, paras 173–74.

¹⁵ *Excel Crop Care Ltd v Competition Commission of India* (2017) 8 SCC 47; *Rajasthan Cylinders and Containers Ltd v Union of India* 2018 SCC OnLine SC 1718.

¹⁶ *Monsanto Co v Spray-Rite Service Corp* 465 US 752, 764 (1984); *Bell Atlantic Corp v Twombly* 550 US 544, 556–57 (2007); William E Kovacic and others, ‘Plus Factors and Agreement in Antitrust Law’ (2011) 110 Mich L Rev 393.

reach: Turner argued that conscious parallelism is not agreement, Posner that tacit collusion should be reachable, and more recent work asks whether agreement is better understood objectively, by what participants must have understood, than subjectively, by a shared state of mind.¹⁷

In a hub-and-spoke case the plus factors have a particular shape. Three kinds of evidence recur across the authorities and, it is suggested, form the proper anatomy of the rim. The first is a *pathway*: proof that information or assurance actually travelled from one spoke through the hub to another. The second is *foresight*: proof that the spoke supplying information knew, or could not reasonably have failed to foresee, that it would reach competitors, and that the recipient understood its source. The third is *reliance*: proof that the recipient adjusted its conduct because of what it received, in circumstances where the supplier expected such adjustment in return.

These elements explain why the rim cannot be reduced to a single question of whether the spokes ‘communicated’. In *Interstate Circuit* a film exhibitor sent the same letter to eight distributors, each of which could see that the others were addressees. The Supreme Court of the United States inferred an agreement from the common invitation, the knowledge that all would receive it, and the uniform response, though no distributor had spoken to another; it was enough that each, knowing concerted action was ‘contemplated and invited’, gave its adherence to the scheme.¹⁸ Pathway, foresight and reliance were all present. Remove any one and the inference weakens: pathway without foresight is accident, foresight without reliance is knowledge only, and reliance without pathway is parallelism. The test is objective: it asks what the circumstances would have told a reasonable competitor, not whether the spokes shared a subjective consensus.

V. Indian Jurisprudence

The Indian decisions fall into four strands, and the pattern across them is more instructive than any single holding.

¹⁷ Donald F Turner, ‘The Definition of Agreement under the Sherman Act: Conscious Parallelism and Refusals to Deal’ (1962) 75 Harv L Rev 655; Richard A Posner, ‘Oligopoly and the Antitrust Laws: A Suggested Approach’ (1969) 21 Stan L Rev 1562; William H Page, ‘Objective and Subjective Theories of Concerted Action’ (2007) 79 Antitrust LJ 215; Louis Kaplow, ‘On the Meaning of Horizontal Agreements in Competition Law’ (2011) 99 Cal L Rev 683.

¹⁸ *Interstate Circuit Inc v United States* 306 US 208, 226–27 (1939).

Resale price maintenance. In *Fx Enterprise* the CCI found that a manufacturer's discount-control policy contravened section 3(4)(e); in *Jasper Infotech* it found no resale price maintenance by a manufacturer that had objected to a marketplace's discounting. Neither asked whether the dealers or sellers understood themselves to be party to a common horizontal scheme.¹⁹ Each allegation succeeded or failed on effects under section 3(4), and the rim was never tested because the framing made it unnecessary.

Platforms. In *Samir Agrawal v ANI Technologies* the informant alleged that Ola and Uber operated as hubs through which drivers fixed fares, invoking sections 3(3)(a) and 3(4)(e). The CCI closed the matter at the prima facie stage under section 26(2). It reasoned that a hub-and-spoke cartel in this setting would need an agreement among the drivers to set prices through the platform, or an agreement for the platform to coordinate prices between them; that it saw none; and that an agreement demonstrating a 'meeting of minds' was a *sine qua non* of any section 3 contravention.²⁰ The NCLAT dismissed the appeal, holding in passing that the United States authority on which the informant relied concerned a foreign jurisdiction and could not be imported.²¹ The Supreme Court set aside the NCLAT's holding that the informant lacked standing, reasoning that proceedings under the Act operate *in rem* in the public interest, but dismissed the appeal on the merits as resting on concurrent findings of fact.²²

Four criticisms may be made of this strand. First, the Commission located the missing element accurately but described it in contractual terms. 'Meeting of minds' is the vocabulary of consensus *ad idem*, which section 2(b) was drafted to dispense with. A requirement of subjective consensus among thousands of independent drivers is unlikely ever to be met by inference, and so turns the rim from an evidential question into an impossibility. Second, the formulation looks for an agreement among spokes to *delegate* pricing and does not ask whether they foresaw and relied on a common mechanism knowing that rivals did the same. The Commission did observe that rides were accepted by anonymous drivers with no opportunity to coordinate, a finding about pathway that was reasonable on the pleaded facts. Third, that finding was made without investigation. No Director General inquiry tested whether drivers

¹⁹ *Fx Enterprise* and *Jasper Infotech* (n 12).

²⁰ *Samir Agrawal v ANI Technologies Pvt Ltd* 2018 SCC OnLine CCI 86 (CCI Case No 37 of 2018, 6 November 2018) paras 15, 18, 20, as reproduced in *Samir Agrawal v Competition Commission of India* (n 22) para 3.

²¹ *Samir Agrawal v Competition Commission of India* 2020 SCC OnLine NCLAT 811 (Competition Appeal (AT) No 11 of 2019, 29 May 2020), as reproduced in *Samir Agrawal v Competition Commission of India* (n 22) para 5.

²² *Samir Agrawal v Competition Commission of India* (2021) 3 SCC 136 (Civil Appeal No 3100 of 2020, 15 December 2020) paras 13–17 (standing) and 23 (merits).

could observe or respond to one another's exposure to the algorithm, so *Samir Agrawal* is thin authority on how a rim is proved. Fourth, the NCLAT's dismissal of comparative authority as foreign is hard to sustain after 2023, when Parliament enacted a provision whose structure is borrowed from that jurisprudence.

Association hubs. These cases have always had a statutory route, because section 3(3) already reaches practices and decisions of associations of enterprises. The CCI itself drew the contrast in *Samir Agrawal*, observing that cement manufacturers colluding through a trade association was a different case from drivers using an app.²³ In the beer cartel decision the CCI found that three brewers had coordinated prices for nearly a decade, with the All India Brewers' Association serving as a platform for exchanging commercially sensitive information, and penalised the association with the brewers; each brewer was a lesser penalty applicant, and the order was appealed.²⁴ These are the closest pre-2023 analogues to a successful hub case, and they succeed where members are shown to have known of and used the shared information flow.

Supplier hubs: HP India. The Commission's most detailed examination of a hub-and-spoke cartel to date came on 13 July 2026. In two suo motu cases that began with lesser penalty applications by HP India itself, the CCI held that HP India was the central enterprise in a hub-and-spoke cartel among its authorised resellers in Government e-Marketplace tenders. On the reported findings, HP India restricted tender participation through the selective issue of Manufacturer Authorisation Forms, allocated customers, exchanged commercially sensitive information and arranged cover bids. Where HP India bid in the same tenders, the Commission treated it and its resellers as competitors; where it did not, it relied on section 3(1) read with section 3(3)(d), holding that a vertical relationship does not insulate a manufacturer that facilitates collusion among competing resellers.²⁵

²³ *Builders Association of India v Cement Manufacturers' Association* (CCI Case No 29 of 2010, 20 June 2012); the contrast is drawn in *Samir Agrawal v ANI Technologies* (n 20) para 20.

²⁴ *In Re: Cartelisation in Beer Industry* (CCI Suo Motu Case No 06 of 2017, 24 September 2021).

²⁵ *HP India Sales Pvt Ltd* (CCI Suo Motu Case No 07 of 2020, 13 July 2026); *HP India Sales Pvt Ltd* (CCI Suo Motu Case No 08 of 2020, 13 July 2026), reported as 2026 SCC OnLine CCI 72 and 73. The account follows Pranjali Prateek, Tanveer Verma and Ritika Ghosh, 'First but Not Forgiven: CCI Denies Full Immunity to Ringleader' (Khaitan & Co, 16 July 2026) <https://www.khaitanco.com/sites/default/files/2026-07/Ergo_HP%20India_16072026.pdf> accessed 5 October 2026, and Ekta Tiwari, 'CCI Penalises HP India and Authorised Resellers for Bid Rigging and Cartelisation in Government e-Marketplace Tenders' (SCC Times, 31 July 2026) <<https://www.sconline.com/blog/post/2026/07/31/cci-hp-india-resellers-cartelisation-bid-rigging-gem-tenders-competition-act/>> accessed 5 October 2026.

Three features matter. First, the proviso was not applied. The conduct and the investigations pre-date the 2023 Act, so the Commission reached a non-competing hub through section 3(1) and a functional view of who is a competitor. That supports the legislative diagnosis, but it raises the question what the proviso adds beyond a clear statutory home and the presumption of AAEC, and the orders may be tested on appeal on precisely the point the proviso was enacted to settle. Second, the rim was proved by documents, not inferred. Emails, messaging records, recordings and the statements of cooperating insiders supplied the connecting evidence. That is the pattern of successful Indian hub cases: they are leniency-driven, and the evidential difficulty described in this article arises in the cases that never reach the Commission with such material. Third, the Commission did not treat the vertical relationship as all-or-nothing. It assessed each reseller individually and declined to find a contravention where evidence of collusion was insufficient, which is Stage Two attribution in practice, and it refused the hub a full reduction in penalty despite its being the first applicant, because of its central role and the benefit it drew.²⁶

Three conclusions follow. Before 2023, the CCI's hub-and-spoke dismissals turned on the absence of a demonstrated rim, and the Commission has not said what evidence would suffice. The proviso would not by itself have changed the outcome in *Samir Agrawal*, because the problem there was the absence of an agreement among spokes, not the status of the hub. And the Commission's successes have been document-driven. The author has identified no reported decision applying the proviso in a contested case, so its operation remains untested.

VI. Comparative Lessons

United States. American law treats the rim as an element to be proved by evidence that each spoke's participation was conditioned on the participation of the others. In *Toys 'R' Us* the retailer secured manufacturers' agreements to restrict supplies to warehouse clubs, and the Seventh Circuit found it significant that each manufacturer had reason to agree only if its rivals did.²⁷ In *Apple*, the Second Circuit upheld the finding that Apple had orchestrated a conspiracy among publishers to raise e-book prices, treating Apple's vertical position as no shield where it knowingly organised a horizontal agreement.²⁸ The rim does not require communication among spokes. It requires proof of interdependent commitment. Characterisation is as decisive

²⁶ *HP India Sales Pvt Ltd* (n 25).

²⁷ *Toys 'R' Us Inc v FTC* 221 F3d 928 (7th Cir 2000).

²⁸ *United States v Apple Inc* 791 F3d 290 (2d Cir 2015).

there as in India: a horizontal conspiracy is condemned per se, while vertical restraints are judged under the rule of reason after *Leegin*, which is why *Apple* drew a dissent that would have applied the rule of reason to what looked like procompetitive vertical entry.²⁹

European Union. European law approaches the problem through concerted practices and facilitator liability. In *AC-Treuhand* the Court of Justice upheld liability for a consultancy that organised meetings, collected and circulated data and mediated disputes, though it did not operate in the cartelised market.³⁰ In *VM Remonts* the Court held that an undertaking may answer for a service provider's conduct where it intended to contribute to the common objectives and knew of the conduct planned or implemented, or could reasonably have foreseen it and accepted the risk.³¹ In *Eturas* a platform administrator sent a message to travel agencies limiting discounts; the Court accepted that awareness of the message could be presumed, but that an agency could rebut the presumption by publicly distancing itself or by reporting the matter to the authorities.³² And in *T-Mobile* the Court held that where undertakings take part in concerting arrangements and remain active on the market, it is presumed, subject to proof to the contrary, that they take account of the information exchanged.³³ The Commission's 2023 horizontal guidelines now address information exchanged indirectly through a common third party.³⁴ European law thus supplies three tools of immediate relevance to India: a foreseeability standard, a defence of distancing, and a presumption of reliance.

United Kingdom. The Court of Appeal in *Argos* upheld the Competition Appeal Tribunal's acceptance of the Office of Fair Trading's three-step analysis. A retailer discloses its future pricing intentions to a supplier in circumstances where it can be taken to know the supplier will pass them to competing retailers; the supplier does so; and the competitor uses the information in setting its own prices.³⁵ It is a compact statement of pathway, foresight and reliance.

Lessons for India. Four observations follow. First, the jurisdictions converge on the same three elements, which supports adopting them as the structure of the Indian rim. Second, none relies

²⁹ *Leegin Creative Leather Products Inc v PSKS Inc* 551 US 877 (2007); *Apple* (n 28) (Livingston J dissenting).

³⁰ Case C-194/14 P *AC-Treuhand AG v Commission* EU:C:2015:717.

³¹ Case C-542/14 *SLA 'VM Remonts' v Konkurencijos padome* EU:C:2016:578.

³² Case C-74/14 *Eturas UAB v Lietuvos Respublikos konkurencijos taryba* EU:C:2016:42.

³³ Case C-8/08 *T-Mobile Netherlands BV v Raad van bestuur van de Nederlandse Mededingingsautoriteit* [2009] ECR I-4529, para 51.

³⁴ Commission, 'Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements' [2023] OJ C259/1.

³⁵ *Argos Ltd v Office of Fair Trading* [2006] EWCA Civ 1318, on appeal from *JJB Sports plc v OFT* [2004] CAT 17 and *Argos Ltd and Littlewoods Ltd v OFT* [2005] CAT 13.

on a special hub provision; each captures the rim through a general concept of agreement or concerted practice. India's statute, by contrast, regulates the hub explicitly while leaving the rim to section 2(b). Third, only the European cases offer a developed account of how a participant may escape liability, which India will need if the proviso's breadth is not to chill legitimate dealing. Fourth, the burden architectures differ. European law presumes reliance once contact is shown and lets the undertaking rebut; India presumes AAEC once an agreement is shown. Indian law may therefore justifiably demand more when proving the agreement than European law demands for a concerted practice, because finding one triggers the heavier section 3(3) presumption. What it may not do is demand a 'meeting of minds'.

VII. The Facilitation–Collusion Continuum

The central proposal of this article is to replace the binary distinction between a "lawful intermediary" and an "unlawful cartel" with a continuum of five stages, each carrying distinct legal consequences. At the first stage, independent facilitation, the hub merely communicates market conditions to each firm separately without transmitting one firm's sensitive information to another, constituting ordinary commercial dealing with no competition concern. At the second stage, sensitive information flow, the hub transmits identifiable, forward-looking, or commercially sensitive information between competitors. This warrants heightened scrutiny but does not, by itself, establish an agreement; Sections 3(4) or 3(1) may instead apply depending on the circumstances. At the third stage, foreseeable reliance, the spokes know or could not reasonably have been unaware of the information flow and rely upon it, with reliance potentially being inferred where forward-looking and attributable price information is involved. At this stage, an inference of a "rim" becomes available, constituting Stage One of the proposed test. At the fourth stage, coordinated conduct, the spokes align their prices, output, bids, or other competitive conduct following the information exchange, supported by connecting evidence. This provides strong evidence of the existence of a rim and makes the establishment of an agreement under Section 3(3) likely. Finally, at the fifth stage, participation, the hub knowingly sustains or benefits from the arrangement while the spokes knowingly accept the framework. At this stage, the presumption under Section 3(3) and its proviso applies to both the hub and the spokes.

The continuum clarifies two points. First, movement along it is driven by what the participants *know and do*, and not by the mere architecture of the arrangement. A platform and its sellers may sit at stage one indefinitely. Second, the legal consequences are cumulative rather than

automatic. Stage three is the earliest at which an inference of a rim becomes available, and stage five is the earliest at which the section 3(3) presumption in its full form should apply.

The same logic governs the hub's own position. A hub may be a passive conduit, a knowing facilitator, or a participant. The difficulty lies in the proviso's second limb, the intention to participate. If mere awareness that spokes may be coordinating were enough, every messaging service, logistics provider and software vendor would be exposed. The better reading requires two things: knowledge of the horizontal object, and conduct by the hub that is capable of advancing or sustaining it. This corresponds to the 'essential role' analysis in *AC-Treuhand* and to the requirement in *VM Remonts* of knowledge or reasonable foreseeability accompanied by acceptance of the risk.

Omission raises a harder case. A hub that learns of coordination and does nothing may be said to acquiesce. It is submitted that omission should support an inference of intent only where the hub had contractual or technical power to stop the coordination and a commercial interest in its continuation, such as a commission linked to the inflated prices. Otherwise the proviso would convert a failure of policing into a cartel offence. The risk is not hypothetical: commentary already suggests that a hub may need to record its explicit disapproval to avoid an inference of intention.³⁶

VIII. Digital Markets and Algorithmic Hubs

Platforms transform the hub-and-spoke problem in three ways. They collect pricing data from competing sellers at a scale no distributor could. They can convert that data into recommendations or automated pricing. And their conduct is often embodied in code rather than in correspondence, which removes the documents on which traditional rim inferences depend. The CCI's 2025 market study on artificial intelligence identifies algorithmic collusion, including through common third-party software, among its concerns, while preferring a light-touch response.³⁷

United States courts have begun to accept that a shared algorithm can supply the pathway, but the authorities are fragile. In *Meyer v Kalanick* the court held plausible an allegation that drivers who agreed to Uber's pricing algorithm, with knowledge that others did the same, formed a hub-and-spoke conspiracy; the Second Circuit later reversed the refusal to compel arbitration,

³⁶ AZB & Partners (n 11).

³⁷ Competition Commission of India, *Market Study on Artificial Intelligence and Competition* (6 October 2025).

so the theory was never tested on the merits.³⁸ In *RealPage* the court allowed claims to proceed where landlords supplied non-public data to a common software provider whose recommendations they were alleged to adopt.³⁹ In *Gibson*, the first federal appellate decision in the field, the Ninth Circuit affirmed the dismissal of claims against Las Vegas hotels that licensed the same revenue-management software, holding that non-binding recommendations are not a restraint of trade where the vendor is not alleged to pool competitors' confidential information, and indicating that the analysis might differ if it did.⁴⁰ *Gibson* thus draws the line this article draws: what matters is not the use of an algorithm but whether confidential data were pooled and whether the spokes were bound to, or in practice relied on, the common output. *Samir Agrawal* is explicable on the same footing: the NCLAT found that Uber's fares were recommendations drivers could negotiate downwards, and that Ola's drivers had no means of sharing information.

Intent poses the most acute difficulty, for an algorithm has no mind. Three responses are available. Responsibility may be attributed to the operator through design choices: an operator that builds and markets a tool whose proposition is to reduce price competition among identified subscribers, using their pooled non-public data, can be taken to intend its consequences, and marketing materials and design records are the evidence. On the spokes' side, subscription to a tool known to be fed by competitors' confidential data is itself evidence of foreseeability. And the *Eturas* distancing defence offers a workable safeguard, since a seller that disables, overrides or publicly rejects a common pricing feature has shown independence. Where algorithms merely implement an agreement that humans made, the problem is evidential rather than conceptual, as the CMA's decision concerning automated repricing software used to police a no-undercutting agreement shows.⁴¹

The framework has a limit. It captures arrangements with a human-designed rim, but not the scenario Ezrachi and Stucke describe, in which self-learning pricing algorithms converge on supra-competitive prices without human agreement or a shared hub, a possibility that experimental work has made harder to dismiss.⁴² Whether it calls for a market-investigation

³⁸ *Meyer v Kalanick* 174 F Supp 3d 817 (SDNY 2016), reversed on arbitration grounds in *Meyer v Uber Technologies Inc* 868 F3d 66 (2d Cir 2017).

³⁹ *In re RealPage Inc Rental Software Antitrust Litigation (No II)* 709 F Supp 3d 478 (MD Tenn 2023).

⁴⁰ *Gibson v Cendyn Group LLC* 148 F4th 1069 (9th Cir 2025).

⁴¹ Competition and Markets Authority, *Online Sales of Posters and Frames* (Case 50223, 12 August 2016).

⁴² Ariel Ezrachi and Maurice E Stucke, *Virtual Competition* (Harvard UP 2016); Joseph E Harrington, 'Developing Competition Law for Collusion by Autonomous Artificial Agents' (2018) 14 J Competition L &

remedy rather than a cartel finding is a separate question; the proviso should not be stretched to fill it, because that would dissolve the requirement of an agreement on which section 3(3) rests.

IX. A Two-Stage, Five-Factor Test

The proposal separates two questions that Indian practice has run together. *Stage One* asks whether a rim exists. *Stage Two* asks whether a given enterprise is to be treated as party to it. Five factors are distributed across the two stages.

Stage One: existence of the rim. The Commission should consider (1) the *nature of the information*: whether it was public or private, historical or forward-looking, aggregated or attributable to an identifiable competitor; (2) the *knowledge* of the spokes: whether each knew, or could not reasonably have failed to foresee, that its information reached rivals and that rivals' information reached it; (3) *reciprocal conduct*: whether the spokes modified their behaviour following the exchange in a way consistent with reliance; and (4) *connecting evidence*: contemporaneous documents, meetings, instructions or pricing responses that tie the spokes together beyond the common intermediary.

Stage Two: attribution. The Commission should consider (5) the *intention* of each enterprise: for a spoke, whether it knowingly accepted the coordinated framework; for the hub, whether it knew of the horizontal object and acted, or, where it held power and interest, refrained from acting, so as to advance or sustain it.

Four operating rules should accompany the factors. First, no factor is sufficient alone, and the inquiry is a holistic assessment of the evidence. Second, knowledge and reciprocal conduct are both necessary at Stage One, because knowledge without altered conduct is not concert and altered conduct without knowledge is parallelism; but for identifiable, forward-looking price information, reciprocal conduct may be inferred, subject to rebuttal, from the spokes' continued activity in the market, in the manner of the presumption of reliance in *T-Mobile*. Third, the factors operate on a sliding scale: the more sensitive the information, the less connecting evidence is required, and the converse. Fourth, the section 3(3) presumption of AAEC should attach only once Stage One is satisfied on the balance of probabilities. Where it is not, the case should be reconsidered under section 3(4) or section 3(1) as an effects-based matter.

Econ 331; Emilio Calvano and others, 'Artificial Intelligence, Algorithmic Pricing, and Collusion' (2020) 110 Am Econ Rev 3267; Michal S Gal, 'Algorithms as Illegal Agreements' (2019) 34 Berkeley Tech LJ 67.

The test contains its own rebuttal: an enterprise may displace the inference by showing an independent commercial explanation or, following *Eturas*, by documenting that it distanced itself from the coordinating mechanism. Compliance functions thereby acquire a legal consequence.

X. Objections and Replies

Two objections deserve an answer. The first is that the test is too demanding: a hub that coordinates through code or oral assurances leaves little evidence, and two stages give sophisticated intermediaries two chances to escape. The reply is that the test is built for circumstantial evidence: the sliding scale lowers the connecting evidence required where information is sensitive, and the presumption of reliance removes the hardest element for forward-looking prices. The greater risk to enforcement is closure at the *prima facie* stage, as in *Samir Agrawal*, before any investigation can test the rim.

The second is that the test is too loose: foresight imports negligence into a regime meant to catch agreement. The reply is that foresight is used as evidence of understanding, not as a substitute for it. A spoke that could not reasonably have failed to foresee that its data reached rivals, and then aligned its conduct, has shown more than carelessness. For the hub the test demands knowledge of the horizontal object, not mere foreseeability of misuse, and *VM Remonts* likewise requires acceptance of the risk.

XI. Policy Recommendations

Four reforms would give the proviso workable content without further legislation. First, the CCI should issue guidelines interpreting the proviso's mental element as requiring knowledge of the horizontal object together with conduct capable of advancing it. Second, the guidelines should set out a safe harbour for historical, aggregated, anonymised or public information, particularly where administered by an independent third party, and identify heightened-risk configurations: forward-looking prices, identifiable competitors, an intermediated flow and observable reciprocal response. Third, platform-specific guidance should address recommended pricing, shared data pools and automated pricing tools, and should recognise documented compliance and distancing as relevant to intention; and where an informant alleges a rim operating through a common algorithm, the Commission should ordinarily direct a Director General investigation under section 26(1) so that pathway, foresight and reliance can be tested against data. Fourth, enforcement should be calibrated to role. The HP India orders

show a hub seeking leniency and being denied full immunity because of its central position, whereas the European regime ties ineligibility for immunity to coercion.⁴³ The Commission should state the criterion it applies, and the penalty regime should be capable of reflecting the difference between a hub that facilitates and a spoke that coordinates.

XII. Conclusion

Where does facilitation end and collusion begin? The answer proposed here is that it does not end when an intermediary connects competitors, nor when competitors use the same intermediary, but when three things coincide: sensitive information passes through the intermediary along a pathway the participants understand; the participants foresee that rivals are on the other end of that pathway and adjust their conduct in reliance on it; and the intermediary knowingly sustains the arrangement. That is the point at which a series of vertical exchanges acquires a horizontal meaning.

The 2023 amendment was a necessary step because it ensured that an intermediary cannot escape the Act merely by standing outside the cartelised market, and the HP India orders show the Commission willing to pursue hubs. It is not a sufficient one. Until the Commission explains how the rim is to be proved where documents do not exist, the proviso will rest on a foundation that the legislature assumed but did not supply. A two-stage framework that separates the existence of the rim from the attribution of liability offers a principled way to supply it, respects the requirement of an agreement on which section 3(3) depends, and preserves room for legitimate intermediaries.

⁴³ Commission Notice on immunity from fines and reduction of fines in cartel cases [2006] OJ C298/17, para 13.