# Data-Driven Market Power: A Comparative Analysis Of EU, US, And Indian Competition Law

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doi.org/10.64643/IJIRTV12I12-201999-459

***Abstract*—The emergence of artificial intelligence as a primary locus of economic competition has foregrounded a structural limitation in existing competition law doctrine: the analytical frameworks for assessing market dominance were designed principally for markets in which competitive advantage is constituted by physical assets, infrastructure, or intellectual property. In AI and data-intensive digital markets, the primary determinant of competitive position is frequently data—its volume, variety, and exclusivity—and the feedback dynamics through which data accumulation translates into market power. This article examines how three of the world's most consequential competition law regimes— the European Union, the United States, and India—approach the assessment of data driven dominance. Drawing exclusively on primary legislative texts, regulatory decisions, and judicial authority, supplemented by peer-reviewed scholarly analysis, the article maps the evidentiary standards applied in each jurisdiction, traces the trajectory of doctrinal development, and identifies points of convergence and structural divergence. It argues that the EU has developed the most doctrinally elaborated framework for incorporating data as a determinant of dominance, that the US approach has evolved significantly following United States v. Google LLC, and that India's Competition (Amendment) Act 2023 represents a significant legislative advance whose enforcement implications remain to be fully worked out. The article concludes with a set of reform proposals aimed at developing a more coherent and operationally workable evidentiary standard for data-based market power across all three regimes.***

***Index Terms*—data-driven dominance, Article 102 TFEU, Section 2 Sherman Act, Competition Act 2002 (India), market power, digital platforms, AI markets, competition law reform**

## I. INTRODUCTION

The transformation of artificial intelligence from a research programme to a commercially deployed technology at scale has altered the competitive dynamics of digital markets in ways that competition law doctrine has been slow to accommodate. The principal mechanism through which AI-enabled firms achieve and sustain competitive advantage is the accumulation of proprietary data. In contrast to conventional industrial inputs, data exhibits distinctive economic properties that interact with market structure in ways that create persistent and self-reinforcing concentration: it is non-rivalrous in consumption, exhibits significant economies of scale and scope in processing and deployment, and generates feedback loops in which superior data endowment improves product performance, attracts additional users, and thereby produces further data accumulation.[1]

These properties raise a fundamental question for the three regimes examined in this article: when does a firm's data advantage constitute, or contribute materially to, a position of dominance within the meaning of Article 102 of the Treaty on the Functioning of the European Union, Section 2 of the Sherman Antitrust Act of 1890, or Section 4 of the Competition Act 2002 (India)?[2] The question is both doctrinal—concerning the evidentiary standard each regime requires to translate data advantage into a legal finding of market power—and institutional, concerning the degree to which courts and agencies in each jurisdiction have developed analytical tools adequate to the task.

The comparison is analytically significant for three reasons. First, the three regimes occupy different

[1] Jacques Crémer, Yves-Alexandre de Montjoye and Heike Schweitzer, Competition Policy for the Digital Era (European Commission 2019) 2 ('Crémer Report').

[2] Treaty on the Functioning of the European Union art 102, 2012 OJ (C 326) 47; Sherman Antitrust Act 1890, 15 USC § 2; Competition Act 2002 (India) s 4.

positions on the spectrum between structural and effects-based analysis and have historically applied different evidentiary thresholds for dominance findings. Second, all three are at materially different stages of doctrinal evolution in response to digital market conditions, making comparison both instructive and practically important for practitioners and policymakers. Third, the volume of enforcement activity across the three jurisdictions over the past decade— involving the same set of firms and market configurations—provides an unusual empirical basis for comparative legal analysis grounded in actual decisional practice.

This article proceeds as follows. Part II establishes a conceptual framework for understanding data as a determinant of market power. Part III analyses the EU approach under Article 102 TFEU, focusing on the Google Shopping, Google Android, and the landmark Facebook/Meta cases before the Bundeskartellamt and the Court of Justice. Part IV examines the
US approach under Section 2 of the Sherman Act, tracing the doctrinal arc from Alcoa and Microsoft through FTC v. Meta Platforms and United States v. Google LLC. Part V analyses the Indian approach under Section 4 of the Competition Act 2002, including the CCI's Android and MakeMyTrip decisions and the implications of the Competition (Amendment) Act 2023. Part VI offers a comparative assessment of evidentiary standards across the three regimes. Part VII concludes with reform proposals.

## II. DATA AND MARKET POWER: A CONCEPTUAL FRAMEWORK

Before turning to the doctrinal analysis, it is necessary to establish a conceptual framework for understanding why and how data advantages translate into market power. This requires attention to three distinct but interrelated economic properties of data as a competitive input.

### A. Data Economies of Scale and Scope

The most frequently observed mechanism through which data generates market power is scale-driven performance improvement. In machine learning systems, model performance— measured across a range of quality dimensions including accuracy, personalisation, and latency— is in significant part a function of the volume and quality of training data. Firms that accumulate larger datasets produce superior model outputs, which generate competitive advantage that attracts more users, who produce more data, perpetuating the advantage. [3] This dynamic is characteristic of general-purpose search, personalised content recommendation, and AI assistant products, among other categories.

Alongside scale economies, data also exhibits scope economies: data accumulated in one product market can frequently be repurposed or leveraged to achieve competitive advantage in adjacent markets. A firm that accumulates detailed consumer behavioural data through a search product may leverage those data assets to achieve dominance in online advertising, e-commerce ranking, or AI assistant services without any independent data collection in those markets.[4] The cross-market dimension of data leverage poses particular challenges for a competition law framework organised around single-market analysis, since the anticompetitive effect may be visible only when both source and target markets are considered together.

### B. Data as a Barrier to Entry

The second mechanism is structural: data advantages create barriers to entry that a new entrant cannot overcome within a commercially viable timeframe regardless of its access to capital or talent. Unlike many other competitive advantages—technological innovation, brand recognition, distribution networks—a data advantage accumulated over millions of user interactions across many years cannot readily be replicated by a new entrant even if it is willing to incur equivalent costs.[5] The Crémer Report commissioned by the European Commission identified this "data barrier" as a structural feature of markets in which data-driven feedback loops operate, and distinguished it analytically from the conventional

[3] Maurice E Stucke and Allen P Grunes, Big Data and Competition Policy (Oxford University Press 2016) 3–5.

[4] Autorité de la concurrence and Bundeskartellamt, Competition Law and Data (Joint Paper, May 2016) 6–8.

[5] Crémer Report (n 2) 7–8.

entry barriers analysed in merger and dominance cases.

A related barrier arises from the multi-sidedness of many digital platforms. In two-sided markets, data accumulation on one side of the platform (users) reduces the marginal cost of attracting the other side (advertisers, developers, or business users), creating a structural asymmetry between incumbents and new entrants that cannot be bridged without simultaneously achieving scale on both sides of the market.[6] This compound barrier reinforces data-driven market power and makes market entry substantially more difficult than a singlemarket analysis would suggest.

C. Feedback Loops and Tipping

The third mechanism is dynamic: data advantages do not merely sustain existing market positions but amplify them over time through positive feedback loops in which superior data endowment produces superior products, which attract more users, which produce more data. In markets subject to such dynamics, the gap between the incumbent's data position and that of potential competitors widens continuously absent external intervention, such that the market may "tip" to a single dominant supplier irrespective of the technical quality of competing offerings.[7]

These three properties—scale economies, structural entry barriers, and feedback dynamics —provide the analytical foundation for the doctrinal analysis that follows. They also identify the key evidentiary questions that a competition authority must address in any data dominance case:–whether the firm's data endowment creates a performance advantage, whether that advantage is replicable by competitors within a relevant timeframe, and whether the interaction between data accumulation and user behaviour has produced or is likely to produce market tipping.[8]

III. THE EU APPROACH: ARTICLE 102 TFEU

A. The Dominance Standard

Article 102 TFEU prohibits the abuse by one or more undertakings of a dominant position within the internal market or a substantial part of it.[9] The concept of dominance has been defined by the Court of Justice as a position of economic strength enjoyed by an undertaking that enables it to behave to an appreciable extent independently of its competitors, customers, and ultimately of consumers.[10] The assessment of dominance requires a prior definition of the relevant market and an evaluation of the undertaking's position within that market, having regard to market shares, the capacity of competitors to constrain the undertaking's behaviour, and structural barriers to entry.

The Hoffmann-La Roche judgment established the principle that very large market shares are, absent exceptional circumstances, sufficient evidence of dominance in themselves, and that the dominant undertaking bears a special responsibility not to allow its conduct to impair undistorted competition on the internal market.[11] The Commission's 2009 Guidance Paper on exclusionary conduct affirmed that dominance is assessed by reference to the competitive constraints an undertaking faces, including not only existing competitors but also potential entrants and countervailing buyer power.[12]

B. Google Shopping and Android: Leveraging Data Across Markets

The Commission's 2017 decision in Case AT.39740 – Google Search (Shopping) represents the first major EU enforcement action in which the Commission addressed, at least implicitly, the role of data advantages in sustaining dominance across adjacent markets. The Commission found that Google held a dominant position in the market for general search services in the European Economic Area, with market

[6] Inge Graef, EU Competition Law, Data Protection and Online Platforms: Data as Essential Facility (Wolters Kluwer 2016) 45–47.

[7] Ariel Ezrachi and Maurice E Stucke, Virtual Competition: The Promise and Perils of the Algorithm-Driven Economy (Harvard University Press 2016) 12–15.

[8] Autorité de la concurrence and Bundeskartellamt (n 4) 9–11.

[9] TFEU art 102 (n 1).

[10] Case 27/76 United Brands Company and United Brands Continental BV v Commission [1978] ECR 207, para 65.

[11] Case 85/76 Hoffmann-La Roche & Co AG v Commission [1979] ECR 461, para 91.

[12] Commission, 'Guidance on the Commission's Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings' [2009] OJ C 45/7, para 10.

shares in excess of ninety per cent in most member states, and that it had abused that position by systematically favouring its own comparison-shopping service over competing services in the display of general search results.

The significance of the decision for data-dominance analysis lies in its treatment of the entry barrier created by Google's search query data. The Commission's analysis reflected the observation—developed more fully in subsequent academic literature—that general search quality is a function of the volume and diversity of search queries processed, and that the data advantage enjoyed by an incumbent general search provider of Google's scale is not replicable by any new entrant regardless of the quality of its underlying search technology.[13] The General Court upheld the Commission's findings in 2021.[14]

The 2018 Google Android decision[15] elaborated the data-leverage analysis further. The Commission found that Google had used contractual restrictions on Android device manufacturers —including requirements for the pre-installation of Google Search and Chrome as conditions for access to the Play Store—to maintain and extend its dominance in general search services and to leverage that dominance into the market for mobile search. The decision expressly recognised that the pre-installation requirements served to reinforce Google's data advantage by ensuring that default search traffic—and the associated user behaviour data—was channelled exclusively to Google Search, foreclosing rival search providers from the data accumulation necessary to achieve competitive parity.

C. Facebook/Meta: Data Collection as Abuse

The most doctrinally significant development in EU data-dominance jurisprudence arose not from Commission proceedings but from the Bundeskartellamt's 2019 decision in the Facebook case.[16] The Bundeskartellamt found that Facebook held a dominant position in the market for social networks for private users in Germany, with a market share of approximately ninety-five per cent.

It further found that Facebook's practice of collecting and combining data from its subsidiary services (Instagram, WhatsApp) and from third-party websites carrying the Facebook login and Like buttons, without meaningful user consent, constituted an abuse of that dominant position.

The legal theory of the case was novel and analytically important. The Bundeskartellamt characterised Facebook's data collection practices as a form of exploitative abuse—an imposition of unfair trading conditions on users who had no practical alternative to accepting those conditions given Facebook's market dominance. The case thus directly linked the capacity for data accumulation to the exercise of market power: a firm without dominance could not have imposed those terms unilaterally, but Facebook's dominance meant that users could not meaningfully withhold consent.

The German Federal Court of Justice upheld the Bundeskartellamt's authority to proceed with the case in June 2020,[16] and the Court of Justice of the European Union issued a landmark preliminary ruling in Case C-252/21 in July 2023, confirming that a competition authority may take into account compliance with GDPR obligations when assessing whether a dominant undertaking has abused its position through its data processing practices.[19] The Court held that a dominant undertaking's systematic acquisition of user data through means that do not comply with data protection law may constitute evidence of market power and, in appropriate circumstances, an abuse of dominance.[17]

The significance of the CJEU's ruling cannot be overstated. It established for the first time at the level of EU primary law that data accumulation practices—and the conditions under which data is collected—are not purely a matter of data protection law but bear directly on the assessment of dominance and its

[13] Crémer Report (n 2) 40–43.

[14] Case T-612/17 Google LLC and Alphabet Inc v European Commission [2021] ECLI:EU: T: 2021:763.

[15] Commission Decision, Case AT.40099 – Google Android [2018] C (2018) 4761 final.

[16] Bundeskartellamt, Decision of 6 February 2019, Case B6-22/16 – Facebook.

[16] BGH, Order of 23 June 2020, Case KVR 69/19 – Facebook (Interim Proceedings) [2020].

[19] Case C-252/21 Meta Platforms Inc and Others v Bundeskartellamt, Judgment of 4 July 2023, ECLI:EU:C:2023:537.

[17] Ibid, paras 45–52.

abuse.[18] This doctrinal development has created the potential for a mutually reinforcing relationship between Article 102 enforcement and data protection regulation, in which the capacity of a dominant firm to acquire data advantages through nonconsensual means is treated as an element of its exclusionary or exploitative conduct.

## IV. THE US APPROACH: SECTION 2 OF THE SHERMAN ACT

### A. The Monopolisation Standard

Section 2 of the Sherman Antitrust Act prohibits monopolisation, attempted monopolisation, and conspiracy to monopolise any part of the trade or commerce among the several states.[20] The Supreme Court has interpreted monopolisation as requiring two elements: the possession of monopoly power in the relevant market, and the wilful acquisition or maintenance of that power through means other than superior product quality, business acumen, or historical accident.

The foundational standard for monopoly power derives from Judge Learned Hand's opinion in United States v. Aluminum Co. of America (Alcoa), which held that a market share of approximately ninety per cent was sufficient to constitute monopoly power, expressed doubt whether a share of sixty to sixty-four per cent would suffice, and held that a share of thirty-three per cent would not.[19] This market-share-based approach to monopoly power has persisted as the primary analytical framework, supplemented by evidence of structural barriers to entry, switching costs, and the absence of significant competitive constraints.

### B. Microsoft and the Exclusionary Conduct Framework

The D.C. Circuit's 2001 en banc decision in United States v. Microsoft Corp. [20] remains the most analytically developed treatment of monopoly maintenance through exclusionary conduct in the US federal courts. The court affirmed that Microsoft held monopoly power in the market for PC operating systems, defined by reference to market share, applications barriers to entry, and network effects arising from the large installed base of Windows-compatible software. The court further held that Microsoft had unlawfully maintained that monopoly through conduct directed at the Netscape Navigator browser and the Java virtual machine, which had the potential to develop into platform-level substitutes for the Windows operating system.

The decision is significant for data-dominance analysis because of its treatment of network effects and complementary barriers to entry. The court's analysis of the applications barrier to entry the structural advantage created by the availability of a large library of Windows-compatible software—is analytically homologous to the data entry barrier in AI markets: it is constituted by an accumulated asset (software compatibility) that cannot be replicated by a new entrant within a commercially viable period, and that creates switching costs reinforcing the incumbent's market position. [21] The Microsoft framework thus provides a doctrinal foundation that can, in principle, accommodate data-based entry barriers as a component of monopoly power analysis.

### C. FTC v. Meta Platforms and the Acquisitions Question

The FTC's complaint against Meta Platforms, filed in December 2020 and subsequently amended, [22] presented the data-dominance theory in the context of acquisitions rather than exclusionary conduct. The FTC alleged that Meta held monopoly power in the market for personal social networking services in the United States, a market defined in part by reference to the network effects and data advantages that distinguished personal social networking from other

[18] Pinar Akman, 'The Role of "Consent" in the Abuse of a Dominant Position by Way of Privacy Policy Tying: Insights from the Facebook Investigation' (2019) 15 European Competition Journal 510, 515–518. [20] Sherman Antitrust Act 1890, 15 USC § 2 (n 1).

[19] United States v Aluminum Co of America (Alcoa), 148 F2d 416, 430–431 (2d Cir 1945) (Hand J).

[20] United States v Microsoft Corp, 253 F3d 34, 51 (DC Cir 2001) (en banc).

[21] Ibid, 58–59.

[22] FTC v Meta Platforms Inc, no 1:20-cv-03590-JEB (DDC, filed 9 December 2020).

forms of digital communication, and that it had unlawfully maintained that monopoly by acquiring Instagram in 2012 and WhatsApp in 2014 when those services represented nascent competitive threats.

The case is doctrinally significant because it required the court to assess whether network effects and user data—rather than physical assets or intellectual property—constituted the relevant basis for Meta's market power. The FTC's market definition theory expressly incorporated the argument that Meta's access to multi-platform behavioural data created an advertising targeting advantage that replicated the data-driven competitive dynamic observed in search markets, and that this advantage was not replicable by entrants without access to comparable data.

### D. United States v. Google LLC: Data as Monopoly Maintenance

The most consequential recent US decision for data-dominance doctrine is the district court's Memorandum Opinion in United States v. Google LLC, issued on 5 August 2024.[23] The court found that Google held monopoly power in the markets for general search services and general text advertising in the United States, and that it had unlawfully maintained that monopoly through a series of exclusive default agreements with device manufacturers, wireless carriers, and browser developers by which Google secured the default search position on the substantial majority of access points to general search services in the United States.

Critically for the analysis in this article, the court's findings addressed the role of data advantages in maintaining Google's monopoly. The court accepted the government's position that the volume and diversity of search queries processed by Google—a consequence of its default access agreements—generated a scale advantage in search quality that rivals could not match, creating a data-driven feedback dynamic that reinforced Google's monopoly position irrespective of the quality of competing search technology.[24] This finding represents the most explicit US judicial recognition to date of data-scale advantages as a component of monopoly maintenance under Section 2.

The decision nonetheless reflects a structural conservatism that has historically characterised US monopolisation doctrine. The court's theory of liability rested on the exclusive default agreements as the operative exclusionary conduct, not on the accumulation of data advantages per se. The implication is that US law remains reluctant to treat data accumulation, absent specific exclusionary conduct, as itself constituting unlawful monopoly maintenance—a structural difference from the EU approach that becomes important for the comparative analysis in Part VI.

## V. THE INDIAN APPROACH: SECTION 4 OF THE COMPETITION ACT 2002

### A. The Statutory Framework

Section 4 of the Competition Act 2002 prohibits any enterprise or group from abusing its dominant position in the relevant market.[25] The Act defines dominance as a position of strength enjoyed by an enterprise or group in the relevant market in India which enables it to operate independently of competitive forces prevailing in the relevant market; or affect its competitors or consumers or the relevant market in its favour. The specific abuses enumerated in Section 4(2) include imposing unfair or discriminatory conditions or prices, limiting or restricting the production of goods or provision of services, indulging in practices resulting in denial of market access, and using a dominant position in one relevant market to enter into or protect another relevant market.[26]

Section 19(4) of the Act provides a non-exhaustive list of factors relevant to the determination of dominance, including market share, size and resources of the enterprise, economic power including commercial advantages over competitors, vertical integration of the enterprise, dependence of consumers on the enterprise, and entry barriers including regulatory barriers, financial risk, high capital cost, and economies of scale.[27] Conspicuously absent from this

[23] United States v Google LLC, No 1:20-cv-03010-APM, Memorandum Opinion (DDC 5 August 2024).

[24] United States v Google LLC (n 29), at 155–163 (finding that Google's exclusive default agreements foreclosed rival search engines from the data-scale advantages necessary to achieve competitive parity in search quality).

[25] Competition Act 2002 (India) s 4.

[26] Competition Act 2002 (India) s 4(2)(a)–(e).

[27] Competition Act 2002 (India) s 19(4).

enumeration is any express reference to data as a determinant of dominance—a structural gap in the statute that has required the Competition Commission of India to develop its data-dominance analysis through decisional practice rather than statutory text.

B. CCI Decisional Practice: Google Cases

The CCI's earliest engagement with data-related market power arose in Cases Nos 07 and 30 of 2012, in which Matrimony.com and Consumer Unity and Trust Society filed complaints against Google LLC alleging bias in the display of general search results in favour of Google's own vertically integrated services.[28] The CCI found that Google held a dominant position in the relevant market for online general web search services in India, a finding supported by Google's market share of over ninety-five per cent, and that it had abused that position by manipulating search results to favour its own services in preference to competing content.

The most significant CCI decision for the analysis in this article is the 2022 order in the Google Android case.[29] The CCI found that Google held dominant positions in multiple relevant markets, including the market for licensable mobile operating systems, the market for app stores for Android mobile operating systems, and the market for online general web search service that it had abused those positions through a range of contractual and technical practices directed at device manufacturers and application developers. The CCI's analysis drew extensively on the European Commission's Android decision and applied a broadly comparable analytical framework to the Indian market.

The data dimension of the CCI's analysis in the Android case is significant. The CCI accepted that Google's pre-installation and default position requirements served in part to ensure that default search traffic—and the associated query data—was directed exclusively to Google Search, reinforcing its data accumulation advantage in a manner analogous to the European Commission's analysis. The CCI treated this data entrenchment effect as a component of the exclusionary conduct under Section 4(2)(c) and (e)—restricting market access and using dominance in one market to protect another. The resulting penalty of Rs 1,337.76 crore represented the largest competition law fine imposed in India to that date. The NCLAT subsequently partly stayed the order pending appeal.[30]

C. MakeMyTrip and Data-Driven Platform Dominance

The CCI's 2021 decision in Case No 14 of 2019 concerning MakeMyTrip[31] illustrates how the Section 4 framework can address data-driven dominance in platform markets beyond the technology giants. The CCI found that MakeMyTrip held a dominant position in the market for online intermediation services for hotel booking in India and that it had abused that position by discriminating against certain hotel chains in the conditions offered for listing. The decision's significance for data analysis lies in the CCI's recognition that MakeMyTrip's dominance was sustained in part by its accumulated user behaviour data, which gave it an advantage in search ranking, price matching, and targeted promotion that hotels and competing platforms could not replicate.

D. The Competition (Amendment) Act 2023

The Competition (Amendment) Act 2023 represents a significant legislative response to the inadequacies of the existing framework for digital market conditions.[32] The most important reform for present purposes is the introduction of a deal value threshold alongside the existing asset and turnover thresholds for pre-merger notification. The new threshold applies to transactions valued at Rs 2,000 crore or more where the target has significant business operations in India, addressing the

[28] CCI, In Re: Matrimony.com Ltd & Ors v Google LLC & Ors, Cases Nos 07 and 30 of 2012, Order dated 8 February 2018.

[29] CCI, In Re: Suo Motu Case No 01 of 2021 (Google Android), Order dated 20 October 2022 (imposing a penalty of Rs 1,337.76 crore).

[30] NCLAT, Google LLC v Competition Commission of India, Company Appeal (AT) (Competition) No 01 of 2023 (partly staying the CCI order pending appeal).

[31] CCI, Case No 14 of 2019 – In Re: MakeMyTrip India Pvt Ltd & Ors, Order dated 9 February 2021.

[32] Competition (Amendment) Act 2023 (India) (introducing, inter alia, a deal value threshold of Rs 2,000 crore for transactions with significant business nexus in India and codifying the concept of 'material influence').

structural gap created by low-revenue but high-strategic-value daacquisitions— precisely the category of transaction that has driven data consolidation in AI markets.

The Amendment Act also codifies the concept of "material influence" as a basis for combination notification, capturing minority investment and partnership structures that fall below conventional acquisition thresholds but may confer significant influence over the competitive decisions of AI firms—a development directly relevant to the investment-without acquisition phenomenon that has characterised the AI industry. The substantive dominance standard in Section 4 is not amended, but the CCI's enforcement capacity with respect to premerger data-asset acquisitions is substantially enhanced.

## VI. COMPARATIVE ANALYSIS: CONVERGENCE, DIVERGENCE, AND EVIDENTIARY GAPS

### A. Areas of Convergence

Across all three regimes, there is clear convergence on several foundational propositions. First, all three jurisdictions accept that data accumulation can constitute or contribute to a finding of market dominance. The Crémer Report's conceptual framework—treating data scale advantages, structural entry barriers, and feedback dynamics as analytically distinct but interrelated components of data-driven market power—is reflected, to varying degrees, in the enforcement decisions of the European Commission, the Bundeskartellamt, the CCI, and the US Department of Justice.[33]

Second, all three regimes treat data advantages as a species of structural barrier to entry rather than as a transient competitive advantage subject to market correction. This treatment reflects a recognition—most explicitly articulated in the EU context—that the self-reinforcing character of data accumulation distinguishes it from other forms of competitive advantage and requires it to be incorporated into the structural assessment of dominance rather than assessed solely at the level of effects.[36] In the US, this recognition has been slower to manifest in doctrine, but the Google LLC district court opinion represents a significant step toward its explicit
incorporation into Section 2 analysis.

### B. Areas of Divergence

The most fundamental divergence between the three regimes concerns the threshold at which data advantage becomes legally cognisable dominance. In the EU, the framework operates at a relatively lower threshold of competitive independence—a firm need not hold a near monopoly share before data advantages become relevant to the dominance finding. The Bundeskartellamt's Facebook decision proceeded on the basis of a ninety-five per cent market share, but the doctrinal framework it applied would in principle be applicable at lower shares where data barriers are sufficiently durable.[34]

In the US, the Alcoa standard—emphasising high market shares as the threshold for monopoly power—creates a structurally higher barrier to data-dominance findings. The effect is to exclude from liability precisely the class of data-enabled near-monopoly situations that fall below the market share threshold of an established monopoly but that may be functionally insulated from competitive entry through data barriers. [35] Hovenkamp has argued that the US standard's structural conservatism may be appropriate as a matter of institutional design— restricting the liability standard to cases where false positives are minimised—but that this conservatism comes at the cost of failing to address data accumulation as a component of market power until the monopoly has already tipped.[36]

A second divergence concerns the treatment of exploitative data conduct. The EU and Indian regimes both recognise exploitative abuses—conduct that imposes unfair conditions on consumers or trading partners—as within the scope of their dominance prohibitions. The Facebook case was primarily an exploitative abuse case: the Bundeskartellamt's

[33] Crémer Report (n 2) 54–58. [36] Graef (n 6) 52–56.

[34] Autorité de la concurrence and Bundeskartellamt (n 4) 14–16.

[35] William E Kovacic and Carl Shapiro, 'Antitrust Policy: A Century of Economic and Legal Thinking' (2000) 14 Journal of Economic Perspectives 43, 57–60.

[36] Herbert Hovenkamp, Federal Antitrust Policy: The Law of Competition and Its Practice (5th edn, West Academic 2016) 612–615.

complaint was that Facebook imposed unfair data collection terms on consumers who lacked a meaningful alternative. US Section 2 doctrine, by contrast, focuses almost exclusively on exclusionary conduct directed at competitors and has historically declined to recognise consumer-facing exploitative conduct as within the statute's scope.[37]

A third divergence concerns the interaction between data-dominance analysis and data protection law. The CJEU's ruling in Meta v. Bundeskartellamt explicitly opened the door to competition authorities drawing on GDPR compliance as evidence relevant to dominance and abuse analysis. No equivalent doctrinal bridge exists in US law, where data protection regulation is sector-specific and fragmented, and where competition courts have generally declined to incorporate non-competition law standards into Section 2 analysis.[41]

C. Evidentiary Gaps Across All Three Regimes

Despite these differences in doctrinal framework, all three regimes share a common evidentiary challenge: the difficulty of constructing a precise causal link between a firm's data endowment and its market power in individual cases. Establishing that a firm has better data than its competitors is relatively straightforward as a descriptive matter; establishing that this data advantage is the cause of competitive foreclosure, rather than one factor among several, requires counterfactual analysis of a kind that courts and agencies have found difficult to operationalise.[38]

Stucke and Grunes have argued that this evidentiary challenge reflects a structural mismatch between the tools developed for static market analysis—designed for markets with stable asset configurations—and the dynamic feedback properties of data-intensive markets in which competitive positions shift continuously in response to user behaviour.[39] The result is that enforcement actions tend to proceed on the basis of specific exclusionary conduct (default agreements, pre-installation requirements, discriminatory listing) rather than on the basis of data accumulation per se, even when data accumulation is the underlying mechanism of market power. This pattern is visible in the Google Shopping, Android, and Google LLC decisions, all of which anchored liability in identifiable conduct rather than in the data-driven feedback dynamic that made the conduct effective.

## VII. CONCLUSION AND REFORM PROPOSALS

The foregoing analysis establishes three conclusions. First, all three major competition law regimes have recognised, in their enforcement practice if not always explicitly in their doctrinal frameworks, that data accumulation constitutes a material determinant of dominance in AI and digital platform markets. Second, the EU has developed the most doctrinally elaborated framework for data-dominance analysis, reflecting both the structure of Article 102 TFEU and the institutional capacity and enforcement ambition of the European Commission and national competition authorities. Third, there remain significant evidentiary gaps in all three regimes that prevent the full translation of data-economic theory into workable legal doctrine.

These conclusions suggest four directions for doctrinal reform. First, all three regimes would benefit from the development of more explicit evidentiary guidelines for data-based market power findings, translating the conceptual framework of the Crémer Report into operationally workable standards for data-scale advantage, feedback loop analysis, and structural entry barrier assessment.[40]

Second, the US regime in particular would benefit from a doctrinal development that recognises data accumulation per se—not merely the specific conduct through which it is reinforced—as a component of monopoly power analysis. The Google LLC district court's findings provide a basis for this development, but the doctrinal framework remains focused on exclusionary conduct rather than structural data advantage.

Third, all three regimes should develop clearer frameworks for the treatment of sequential and minority-stake data acquisitions. The Competition (Amendment) Act 2023's deal value threshold provides one model; the EU's experience with Article

[37] Stucke and Grunes (n 3) 195–200. [41] Khan (n 31) 748–750.

[38] Ezrachi and Stucke (n 7) 85–90.

[39] Stucke and Grunes (n 3) 180–185.

[40] Crémer Report (n 2) 60–65.

22 EUMR referral mechanisms for below-threshold transactions provides another.[41]

Fourth, the interaction between data protection law and competition law established by the CJEU in Meta v. Bundeskartellamt should be developed into a more systematic framework for assessing when non-consensual data collection practices constitute evidence of, or contribute to, an abuse of dominance. The EU is best placed to develop this framework, but its insights have potential application in India given the coming into force of the Digital Personal Data Protection Act 2023, and should inform US regulatory debates about data privacy legislation with competition dimensions.

The doctrinal gap between data-economic theory and competition law practice is not a gap that can be closed by better economic modelling alone. It requires competition authorities and courts to develop new evidentiary conventions, new analytical tools, and a greater willingness to make structural findings about data-driven market power before monopolies have already tipped to the point where the standard remedial toolkit—divestiture, behavioural orders, access obligations—can offer only incomplete relief.

[41] Competition (Amendment) Act 2023 (India) (n 41).