



Characterising Ecosystem Power: the Use of Pricing and Contractual Leverages

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ARTICLE



ABSTRACT

This paper presents a conceptualisation and characterisation of ecosystem power, distinguishing it from market power and bargaining power. Unlike market power, which primarily concerns external relationships of a firm, and bargaining power, which addresses bilateral relationships, ecosystem power operates through multi-sided relationships, shaping pricing and contractual structures and determining welfare distribution among stakeholders within ecosystems. By identifying pricing and contractual leverages as key mechanisms for the exercise of ecosystem power, the paper demonstrates how platforms exploit economically dependent user groups while favouring others, often consumers, without necessarily enhancing overall welfare. The paper also provides an overview of the legal assessment of the use of pricing and contractual leverages under EU competition law, as well as its intersection with contract law and consumer law. Competition law, traditionally focused on external market relations, lacks tools to regulate internal welfare distribution, while consumer and contract law fail to adequately protect economically dependent users, especially small businesses and gig workers within ecosystems. To address these gaps, the paper proposes the concept of distributive equity as a further consideration for antitrust enforcement to ensure an equitable welfare distribution across ecosystem participants.

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In the context of competition law, the terms ‘platform ecosystems’ and ‘digital ecosystems’ are often used to describe platforms that provide an infrastructure that integrates interconnected services.¹ These services often rely on one another to enhance user experience, create added value and encourage deeper engagement.² In these ecosystems, interconnection and interdependency exist not only among different user groups but also across various embedded services.

As the digital market becomes increasingly concentrated, regulating digital ecosystems and their powers has become one of the central issues of EU competition law. For example, in 2017, the European Commission investigated Google’s strategy for its comparison shopping service and found that Google abused its dominance by favouring its own comparison shopping service in search results, disadvantaging competitors.³ In 2018, the Commission charged Google with abuse of dominance through the tying of Google’s search and browser apps and exclusivity payments.⁴ Another famous ecosystem, Amazon, was investigated by the Commission for using non-public seller data to minimise retail competition risks and for potentially unfairly favouring its own products in the ‘Buy Box’.⁵ This investigation led Amazon to offer commitments to address these concerns, which the Commission accepted in December 2022.⁶ In 2021, the Dutch Authority for Consumers and Markets (ACM) found that Apple had abused its dominant position by enforcing its in-app payment system and prohibiting developers from directing users to alternative payment options.⁷ In 2024, the Commission also concluded that Apple abused its dominance by imposing anti-steering provisions.⁸

While a growing body of scholarship and antitrust enforcement recognises the increasing power of digital ecosystems, the concept of ecosystem power and how it differs from market power and bargaining power in traditional multi-sided platforms (MSPs) remains underexplored. This paper addresses this knowledge gap by exploring the conceptualisation and characterisation of ecosystem power in digital ecosystems.

The first section, Section 2, of this paper reviews the literature on ecosystems and ecosystem power, conceptualising ecosystem power and examining its differences from traditional market power and bargaining power. In the second section, Section 3, the paper offers a further characterisation of ecosystem power, which manifests through both pricing and non-pricing mechanisms. In the third section, Section 4, this paper analyses the theory of harms of pricing and contractual leverages, providing an overview of the legal assessment of the use of pricing and contractual leverages under EU competition law, as well as its intersection with contract law and consumer law. Lastly, in Section 5, the paper proposes the concept of distributive

1 M Subramaniam et al., ‘Competing in Digital Ecosystems’ (2019) 62 *Business Horizons*, 83; A Hein et al., ‘Digital Platform Ecosystems’ (2020) 30 *Electronic Markets*, 87; B Kira et al., ‘Regulating Digital Ecosystems: Bridging the Gap between Competition Policy and Data Protection’ (2021) 30 *Industrial and Corporate Change*, 1337; V Robertson, ‘Antitrust Market Definition for Digital Ecosystems’ (2021), <<https://www.concurrences.com/en/review/issues/no-2-2021/dossier/xxx-digital-xxx>> (accessed 1 May 2024); M Jacobides & I Lianos, ‘Ecosystems and Competition Law in Theory and Practice’ (2021) 30 *Industrial and Corporate Change*, 1199.

2 Jacobides & Lianos (n 1), 1201.

3 European Commission, Decision AT.39740 Google Shopping of 27 June 2017 [2017].

4 European Commission, Decision AT.40099 Google Android of 18 July 2018 [2018].

5 European Commission, ‘Antitrust: Commission Sends Statement of Objections to Amazon for the Use of Non-Public Independent Seller Data and Opens Second Investigation into Its e-Commerce Business Practices’ (10 November 2020) <https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2077> (accessed 17 October 2024).

6 European Commission, ‘Antitrust: Commission Accepts Commitments by Amazon’ (20 December 2022) <https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7777> (accessed 7 November 2024).

7 Netherlands Authority for Consumers and Markets (ACM), ‘Decision of the Netherlands Authority for Consumers and Markets within the Meaning of Section 56 of the Dutch Competition Act and Section 5:32(1) of the Dutch General Administrative Law Act (Awb) Regarding the Imposition of an Order Subject to Periodic Penalty Payments on Apple Inc. and Apple Distribution International Ltd for the Violation of Section 24 of the Dutch Competition Act and Article 102 TFEU (ACM/UIT/559984)’ (2021) ACM/19/035630 <<https://www.acm.nl/sites/default/files/documents/summary-of-decision-on-abuse-of-dominant-position-by-apple.pdf>> (accessed 17 October 2024).

8 European Commission, ‘Commission Fines Apple over €1.8 Billion over Abusive App Store Rules for Music Streaming Providers’ (4 March 2024) <https://ec.europa.eu/commission/presscorner/detail/en/ip_24_1161> (accessed 7 November 2024).

2. ECOSYSTEMS AND ECOSYSTEM POWER

2.1. DIGITAL (PLATFORM) ECOSYSTEMS

The term ‘ecosystem’ first emerged in the field of business literature to describe mutual dependencies.⁹ While ecosystems are conceptualised differently across different research paradigms, such as economics, technology, business and social sciences,¹⁰ this paper adopts an economic perspective, as it is most relevant for the analysis of the economic structure of ecosystems and the exercise of the power of platforms within the ecosystems.

From this perspective, ecosystems are characterised by complementarities and interorganisational relationships. Jacobides and Lianos describe digital ecosystems as interconnected and interdependent systems composed of multi-actor groups of collaborating complementors and multi-product bundles.¹¹ Within these ecosystems, integrated services are not merely connected. They often rely on one another to enhance user experience, create added value and encourage deeper engagement.¹²

For instance, Amazon operates as an extensive, interconnected ecosystem encompassing e-commerce, cloud computing (Amazon Web Services), streaming (Amazon Prime Video), smart home devices (Alexa), logistics (Fulfilment by Amazon) and more with each service enhancing the value of the others. These integrated services deliver a seamless, comprehensive experience for users.¹³ Similarly, as illustrated in *Google Android*, Google not only offers a web of services (e.g., Google’s Play Store, Chrome browser, Search) but also develops the underlying technical infrastructure (e.g., Android operating system, cloud services, application programming interfaces) that supports a range of interconnected applications.¹⁴

The deep interdependence within platform ecosystems distinguishes them from traditional MSPs. Traditional MSPs, such as Visa and Mastercard, operate as two- or multi-sided systems without necessarily integrating interconnected services. While credit card systems exhibit complementarity and generate indirect network effects – e.g., the acceptance of cards by merchants and the number of cards in circulation influence each other¹⁵ – the ‘issuing’ and ‘acquiring’ sides remain largely independent outside the core transaction, with limited interactions between them. These platforms derive their primary value from facilitating exchanges rather than providing a suite of interdependent services that are deeply interdependent and foster user engagement. In contrast, platform ecosystems derive their value not only from facilitating transactions but also from fostering deeper engagement across a range of interdependent service types.

While extensive literature addresses the concept of ecosystems, the notion of ‘ecosystem power’ and its distinctions from traditional market power remain underexplored. Some scholars focus on the function of platforms as gatekeepers, highlighting how platform ecosystems control

⁹ J Moore, ‘Predators and Prey: A New Ecology of Competition’ (1993) *Harvard Business Review*, <<https://hbr.org/1993/05/predators-and-prey-a-new-ecology-of-competition>> (accessed 7 November 2024); M Iansiti & R Levien, ‘Strategy as Ecology’ (2004) *Harvard Business Review*, <<https://hbr.org/2004/03/strategy-as-ecology>> (accessed 7 November 2024); Hein et al. (n 1), 89.

¹⁰ Hein et al. (n 1), 89.

¹¹ Jacobides & Lianos (n 1), 1201.

¹² *ibid.*

¹³ M Ceccagnoli et al., ‘Co-Creation of Value in a Platform Ecosystem: The Case of Enterprise Software’ (2012) 36 *MIS Quarterly*, 263, 264; A Gower, ‘Bridging Differing Perspectives on Technological Platforms: Toward an Integrative Framework’ (2014) 43 *Research Policy*, 1239–1240; K Valkokari et al., ‘Orchestrating Innovation Ecosystems: A Qualitative Analysis of Ecosystem Positioning Strategies’ (2017) 7 *Technology Innovation Management Review (TIM Review)*, 12; S Mukhopadhyay & H Bouwman, ‘Orchestration and Governance in Digital Platform Ecosystems: A Literature Review and Trends’ (2019) 21 *Digital Policy, Regulation and Governance*, 329.

¹⁴ Case T-604/18 *Google Android* [2022] EU:T:2022:541, para. 116.

¹⁵ Case C-382/12 P *MasterCard* [2014] EU:C:2014:2201, para. 178.

access to essential infrastructure and data.¹⁶ Others analyse governance mechanisms within ecosystems, emphasising platforms' regulatory functions in designing and enforcing terms and conditions (T&Cs), platform policies and community guidelines.¹⁷

Yet, my previous study suggests that the gatekeeper and regulatory roles can give rise to a third, often overlooked role: the distributive function of ecosystems.¹⁸ As shown in Section 3, the gatekeeper and regulatory functions enable platforms to exert significant influence over the design of pricing and contractual structures that encompass various user groups and interconnected services, thereby impacting – or even determining – the distribution of welfare across ecosystem participants.

This paper builds on these three functions to propose a working definition of ecosystem power: the ability of digital platforms to control ecosystem access, determine pricing and contractual structures and thereby influence welfare distribution among ecosystem participants. This ecosystem power differs from traditional market power under competition law and from bargaining power under contract and consumer law.

2.2. ECOSYSTEM POWER VS MARKET POWER UNDER COMPETITION LAW

Traditionally, EU competition law focuses on a firm's external relationships and practices in relation to competitors, consumers and trading partners in upstream and downstream markets. While market power is not explicitly defined in legal terms, the concept is closely associated with dominance under Article 102 TFEU. In cases like *United Brands*, the European Court of Justice (ECJ) described dominance (market power) as a position of economic strength that allows a firm to prevent effective competition and behave independently of its competitors, customers and consumers.¹⁹ Such economic strength is typically associated with factors like market share and entry barriers, reflecting a firm's ability to raise prices, reduce output or limit consumer choices.²⁰

In contrast, ecosystems encompass multiple stakeholders – such as consumers, product and service providers, and advertisers – who are interconnected through the platform and embedded within the ecosystem. Unlike market power, which primarily affects external market relations, ecosystem power operates inwardly, shaping pricing structures and contractual relationships within the ecosystem. For instance, Apple can wield its ecosystem power over consumers (iPhone and App Store users), service providers (app developers) and other user groups like advertisers. Enabled by its role as gatekeeper and regulator, Apple can set pricing and contractual structures, (re)distribute financial and contractual burdens across these stakeholders, thereby influencing welfare distribution within the ecosystem. However, when Apple competes with another ecosystem, like Google's, market power – driven by factors such as market share – plays a more central role.

As digital ecosystems can often be dominant platforms due to network effects, ecosystem power can also interact with market power. This occurs when an ecosystem imposes non-neutral pricing or contractual structures, resulting in both exploitative effects within the ecosystem and exclusionary effects toward external competitors. This interaction is explored in further detail in Section 4.1.

¹⁶ O Lynskey, 'Regulating "Platform Power"' (2017) *LSE Legal Studies Working Paper*, 9–13; S Martinelli, 'The Vulnerable Business User: The Asymmetric Relationship Between The Business User And The Platform' (2020) *European Journal of Privacy Law & Technologies*, 84–85 (accessed 17 October 2024), <<https://universitypress.unisob.no.it/ojs/index.php/ejpl/article/view/1261/541>>; Kira et al. (n 1), 1343.

¹⁷ Martinelli (n 16), 84; J Cr  mer et al., 'Competition Policy for the Digital Era: Final Report' (2019) KD-04-19-345-EN-N 60 *Publications Office of the European Commission* (accessed 17 October 2024), <<https://op.europa.eu/en/publication-detail/-/publication/21dc175c-7b76-11e9-9f05-01aa75ed71a1/language-en>> (accessed 18 June 2025).

¹⁸ Yibo Li, 'Vulnerable Sellers and Favored Consumers: A Critical Analysis of Distributive Equity in Multi-Sided Platforms' (2023) 11 *International Journal on Consumer Law and Practice* <<https://repository.nls.ac.in/ijclp/vol11/iss1/1/>>.

¹⁹ Case C-27/76 *United Brands* [1978] European Court of Justice, EU:C:1978:22, 65; Case C-85/76 *Hoffmann-La Roche v Commission* [1979] European Court of Justice, EU:C:1979:36, 38.

²⁰ R Whish & D Bailey, *Competition Law* (Oxford University Press, 2021) ch 1 <<https://www.oxfordlawtrove.com/display/10.1093/he/9780198836322.001.0001/he-9780198836322>> (accessed 2 October 2024).

Ecosystem power operates with a distributive effect and is typically exercised within triangular or multi-party relationships. For instance, an online marketplace can exercise its ecosystem power within a triangular relationship involving retailers, buyers and itself. In the context of a food delivery ecosystem, the ecosystem power of the platform can extend to all linked services in the ecosystem, involving multiple parties such as restaurants, riders, consumers and the platform itself. Hence, a platform can choose to prioritise certain user groups while exploiting others, a decision often driven by profit maximisation and influenced by factors such as price sensitivity and economic dependence of users, as illustrated in Section 3.2.

This distributive function distinguishes ecosystem power from ‘bargaining power’ as addressed in contract law and consumer law, which is generally exercised within bilateral business-to-consumer (B2C) and business-to-business (B2B) contexts.²¹ Bargaining power focuses on the relative strength of parties in direct negotiations, such as the ability to set terms. However, it does not account for power dynamics beyond the immediate bilateral relationship present in platform ecosystems.

For instance, on Amazon Marketplace, the sale contract is formally between the seller and the buyer. Yet neither party has full autonomy over the provisions of the agreement, such as return policies: Amazon imposes conditions such as a mandatory 30-day return policy, which sellers must accept to operate on the marketplace.²² In this scenario, the assessment of the bargaining power in the bilateral relationship between sellers and buyers fails to capture the overarching influence wielded by Amazon. Meanwhile, assessing the bilateral T&Cs among Amazon and their sellers (e.g., extended return period) cannot effectively account for the contractual benefits received by the buyers. By contrast, the concept of ecosystem power provides a framework for analysing these dynamics and understanding the power exercised by the platform. With its focus on the platform’s distributive function, ecosystem power describes how platforms distribute financial and contractual burdens in a triangular relationship and how they ultimately influence welfare distribution among ecosystem participants.

Given the broader distributive function of ecosystem power, the examination of this power lies at the intersection of competition law, contract law and consumer law. Ecosystem power encompasses not only B2B and B2C relationships but also platform-to-business (P2B) and platform-to-consumer (P2C) interactions. These relationships, coupled with different policy objectives across legal paradigms, may lead to inconsistencies in assessing the effects or legality of the exercise of ecosystem power. This issue will be further explored in section 4.2.

3. CHARACTERISING ECOSYSTEM POWER

This paper identifies three key features regarding how ecosystem power is exercised: (1) the design of a non-neutral pricing or contractual structures; (2) these are often based on users’ economic dependence, followed by (3) the distributive effects of these arrangements.

3.1. NON-NEUTRAL PRICING AND CONTRACTUAL STRUCTURES

Ecosystem power is often exercised by establishing a non-neutral pricing or contractual structure. Firstly, by employing a mix of low and high pricing strategies across interconnected services and user groups, platforms can create a non-neutral pricing structure within their ecosystems. This strategy, known as pricing leverage or cross-subsidisation, is not unfamiliar to platform economists.²³ As a solution to the ‘chicken and egg’ problem in traditional multi-sided markets, pricing leverage is commonly adopted by platforms to attract an initial user base and

21 D. Barnhizer, ‘Bargaining Power in Contract Theory’ in L. DiMatteo et al. (eds.), *Visions of Contract Theory: Rationality, Bargaining, and Interpretation* (Carolina Academic Press, 2007), <<https://papers.ssrn.com/abstract=578578>> (accessed 2 December 2024).

22 Amazon.com.be, ‘About Our Returns Policies’ (2024); Amazon Customer Service, <<https://www.amazon.com.be/-/en/gp/help/customer/display.html?nodeId=GKM69DUUYKQWKWX7>> (accessed 28 December 2024).

23 J.C. Rochet & J. Tirole, ‘Two-Sided Markets: A Progress Report’ (2006) 37 *The RAND Journal of Economics*, 664–665.

generate cross-group network effects.²⁴ By selectively offering favourable prices to one group, MSPs can expand their user base and foster growth.

For ecosystems, however, the purpose of maintaining or further intensifying such non-neutrality in the pricing structure is no longer about establishing an initial user base, as they have already built a sufficient user base and strong network effects. Here, the goal of pricing leverage is to capitalise on these network effects to further exploit user groups that are less price-sensitive and more economically dependent on the ecosystem, maximising platform control and profitability. The use of such pricing leverages and the design of non-neutral pricing structure can be observed in the prevalent ecosystem model of offering free services to consumers while charging product and service providers high commission fees or charging advertisers for users' attention (e.g., Apple, Amazon, Google).

In addition to pricing mechanisms, platforms can wield ecosystem power through non-pricing mechanisms. Platforms influence contractual relationships within their ecosystems by establishing T&Cs, platform policies or standardised contracts for their users.²⁵ With this regulatory power, a platform can create a non-neutral contractual structure by offering favourable terms to one user group while shifting the corresponding burdens to another user group(s). Since a well-defined legal or economic vocabulary for these non-pricing mechanisms has yet to be fully developed, this paper refers to such practices as 'contractual leverage'.

	PRICING LEVERAGES	CONTRACTUAL LEVERAGES
create...	a non-neutral pricing structure	a non-neutral contractual structure
by influencing...	e.g., commission fee, service fee, subscription fee	e.g., the distribution of contractual duties, rights and risks, access to platform services, micro-management
in forms of...	subsidy (for one side) and markup (for another side)	favourable terms (for one side) and unfavourable terms (for another side)
favouring...	users with less economic dependence (e.g., that are more sensitive to changes of prices, or with a higher degree of multi-homing)	
exploiting...	users with more economic dependence (e.g., that are less sensitive to changes of prices, or with a lower degree of multi-homing)	

Table 1 Comparison of pricing and non-pricing (contractual) leverages.

The first and most common way in which ecosystems create a non-neutral contractual structure is by directly (re)distributing contractual rights, duties and risks among users through establishing standardised linked contracts (e.g., sale or service contracts between users) and platform policies that substantially deviate from legal benchmarks. For instance, while consumers have a period of 14 days to withdraw from a contract concluded online under EU consumer protection legislation,²⁶ retail ecosystems such as Amazon (30 days) and Zalando (100 days) often require their retailers to offer an extended return period.²⁷ Although these extended withdrawal periods are labelled as 'voluntary' by platforms, compliance with these policies is a mandatory prerequisite for retailers to access the ecosystems' infrastructure. By inserting these provisions into sale contracts between sellers and buyers, Amazon wields its ecosystem power and (re)distributes the contractual burdens associated with returns, effectively shifting the risks and costs onto retailers while consumer welfare seems enhanced.

The second way to create a non-neutral contractual structure is by granting users unequal access to platform services, such as customer support for dispute resolution. For example,

²⁴ S Gates et al., 'Deterring Predation in Telecommunication: Are Line-of Business Restraints Needed?' (1995) 16 *Managerial and Decision Economics*, 427–429.

²⁵ Martinelli (n 16), 84; Cr  mer et al. (n 17), 60.

²⁶ Consumers in the EU have 14 days to indicate that they wish to return a product and another 14 days to send it. This paper means the first 14 days when it refers to the 'withdrawal period' or 'return period'. See Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, OJ L 304, 22.11.2011, p. 64–88 (Consumer Rights Directive), Arts 9, 14.

²⁷ Amazon.com.be (n 22); Zalando.be, 'What Is Your Return Policy?' (2025), <<https://fr.zalando.be/aide/Returns-and-Refunds/what-is-your-return-policy.html>> (accessed 10 January 2025).

buyers on Amazon have easy access to initiate claims against retailers, but the same access is not readily available to sellers, creating an asymmetry in dispute resolution capabilities.²⁸ Lastly, ecosystems can create a non-neutral contractual structure through micro-management. For instance, Uber and the Chinese food delivery ecosystem Meituan employ algorithmic management that ensures an optimal experience for consumers while enforcing strict performance metrics and passing on the risks to their drivers and riders.²⁹ By assigning tasks, monitoring performance and making decisions about rewards and penalties, platforms transfer operational risks to workers, often under strict performance metrics.³⁰

Pricing and contractual leverages can also be used in combination to create a non-neutral structure among users. For instance, after being accused of charging an excessive commission fee in its App Store, Apple argues that it provides significant value through its innovations and infrastructure, including the free services offered to app users, which justify the 30% commission fee imposed on app developers.³¹

3.2. NON-NEUTRALITY BASED ON ECONOMIC DEPENDENCE

While pricing leverage seeks to capitalise on and exploit the side that is less sensitive to price changes, contractual leverage targets the side that is less sensitive to changes in the favourability of contractual terms. Both types of leverage are closely connected to economic dependence. For example, the non-neutrality of pricing and contractual leverage can manifest as favourable rates and terms for consumers (such as Amazon users), while exploiting the economic dependence of product providers (e.g., sellers on the Amazon marketplace)³² or service providers (e.g., app developers on the Apple App Store and workers on the Amazon Mechanical Turk).³³

The concept of economic dependence, as stipulated in national competition laws in some EU member states, has various legal definitions, such as ‘insufficient and unacceptable means of switching to other undertakings’ (Germany),³⁴ ‘the difficulty for the retailer to find other equivalent products from other suppliers’ (France)³⁵ and ‘the lack of reasonable alternative’ (Belgium).³⁶ Despite having different focuses, the common elements underscored by these national legislations and case laws are the difficulty of, and costs related to, switching from one trading partner to another one.

From an economic perspective, the dependence on ecosystems can be traced back to two primary factors: switching costs and opportunity costs. Switching costs consist of the economic expenditures, both tangible and intangible, that product and service providers bear when

²⁸ Li (n 18), 216–217.

²⁹ A Rosenblat & L Stark, ‘Algorithmic Labor and Information Asymmetries: A Case Study of Uber’s Drivers’ (2016) 10 *International Journal of Communication*, 27; L Chen, ‘Labor Order under Digital Control: A Study on the Labor Control of Take-out Platform Riders’ (2020) 6 *Sociological Studies*, <<https://shxyj.ajcass.com/Magazine/show/?id=76189>> (accessed 10 June 2024).

³⁰ Rosenblat & Stark (n 29); Chen (n 29).

³¹ *Kent v Apple* [2022] UK Competition Appeal Tribunal, 1403/7/7/21, 66–68.

³² Li (n 18).

³³ A Semuels, ‘The Internet Is Enabling a New Kind of Poorly Paid Hell’, *The Atlantic*, 23 January 2018, <<https://www.theatlantic.com/business/archive/2018/01/amazon-mechanical-turk/551192/>> (accessed 11 November 2024); CPI, ‘Apple Accused of Charging Excessive Fees in New UK App Store Suit’, *PYMNTS.com*, 25 July 2023, <https://www.pymnts.com/cpi_posts/apple-accused-of-charging-excessive-fees-in-new-uk-app-store-suit/> (accessed 15 May 2024); C Fowler et al., ‘Frustration and Ennu among Amazon MTurk Workers’ (2023) 55 *Behavior Research Methods*, 3009; European Commission (n 8).

³⁴ P Kéllezzi, ‘Abuse below the Threshold of Dominance? Market Power, Market Dominance, and Abuse of Economic Dependence’ in M Mackenrodt et al. (eds.), *Abuse of Dominant Position: New Interpretation, New Enforcement Mechanisms?* (Springer, 2008) 62 <https://doi.org/10.1007/978-3-540-69965-1_3> (accessed 3 August 2023); *Rossignol* [1976] German Federal Court (Bundesgerichtshof) WuW/E 1391 [A.I.2].

³⁵ French Competition Council (Autorité de la concurrence), ‘Décision N° 05-D-44 Du 21 Juillet 2005 Relative à Des Pratiques Mises En Oeuvre Par Le Groupe La Provence (Anciennement Dénommé Le Provençal) Dans Le Secteur De La Publicité Dans La Presse Quotidienne Régionale à Marseille’ (2005), 23; Kéllezzi (n 34), 64.

³⁶ *Legio Sales Belgium* [2020] Brussels Enterprise Court (Tribunal de l’entreprise de Bruxelles) C/20/00057; *GD/Woody* [2020] Ghent Enterprise Court (Ondernemingsrechtbank Gent) A/20/02490; *Pletsers* [2021] Antwerp Enterprise Court (Tongeren) (Ondernemingsrechtbank Antwerpen (Tongeren)) A/21/00024; J Dewispelaere & H Victoria, ‘Prohibition on Abuse of Economic Dependence: First Lessons from the Case Law’ (2021) 5 *European Competition and Regulatory Law Review*, 394.

transitioning from one platform to another.³⁷ Such costs can be considerable, especially for users who have devoted substantial time and resources to familiarise themselves with the platform and establish their presence. The sunk costs associated with platform-specific investments, such as learning costs, personalised storefronts, product listings and customer reviews, can increase the difficulty of multi-homing³⁸ and discourage retailers and workers from switching to a different platform, thereby reinforcing their economic dependence.

Opportunity costs, on the other hand, include the potential loss of revenue or customer access that product and service providers face when exiting a platform. In *Google Android*, the General Court referenced the findings of the European Commission (the Commission) and highlighted that an app developer would probably continue to operate for Android even if there were small quality degradations in the operating system.³⁹ This is because such developers inherently aim to cater to the vast majority of users.⁴⁰ Consequently, the opportunity costs associated with departing an ecosystem that commands a substantial user base can be significant. For instance, a seller exiting Amazon marketplace or a worker leaving Amazon Mechanical Turk would lose access to its extensive customer base, potentially leading to a great decline in revenue. This potential loss can render the prospect of platform departure economically unviable, thereby reinforcing economic dependence on the platform.

On the other hand, consumers (end-customers) typically face fewer switching costs and opportunity costs. Switching costs for consumers mostly encompass the temporal and cognitive investments necessitated by acquainting themselves with a new ecosystem's user interface, policies and operational procedures. However, these costs are generally less substantial than those encountered by product and service providers, given that these buyers are not typically required to make significant investments to utilise a platform.

As a result of lower switching costs and opportunity costs for consumers, their dependence on the ecosystem is reduced, making it easier for them to multi-home across different ecosystems compared to retailers and workers. This contrast in switching and opportunity costs between consumers and other user groups potentially explains why platforms adopt a consumer-centric approach which prioritises consumer satisfaction while exploiting the others. Although customer satisfaction has always been a priority for all types of businesses, the use of pricing and contractual leverage can be problematic as it significantly influences welfare distribution among ecosystem participants and can have a particularly detrimental impact on small businesses or gig workers with limited bargaining power.

3.3. DISTRIBUTIVE EFFECTS

Pricing and contractual leverages do not inherently contribute to the overall quality or efficiency of an ecosystem's service, which distinguishes them from quality competition. Quality competition focuses on improving service quality and, in the case of zero-price services, enhancing variety and innovation.⁴¹ For instance, measures such as increasing transparency through information duties or fostering trust by implementing review systems directly improve the quality of the ecosystem's services and benefit all participants.⁴² These quality-enhancing measures contribute to the overall welfare of the ecosystem rather than simply redistributing existing welfare among users.

In contrast, pricing and contractual leverages (re)distribute financial and contractual burdens among users in a manner that benefits one group at the expense of another. Cross-subsidisation

³⁷ European Commission, 'Study on Contractual Relationships between Online Platforms and Their Professional Users: Final Report' (2018) KK-01-18-452-EN-N 60, <<https://doi.org/10.2759/950526>> (accessed 17 October 2024).

³⁸ Digital Competition Expert Panel, 'Unlocking Digital Competition, Report of the Digital Competition Expert Panel' (2019) PU2242 36, <<https://www.gov.uk/government/publications/unlocking-digital-competition-report-of-the-digital-competition-expert-panel>> (accessed 17 October 2024).

³⁹ *Google Android* (n 14), para 218.

⁴⁰ *ibid.*

⁴¹ *ibid.*, para 117; Organisation for Economic Co-operation and Development (OECD), 'Quality Considerations in the Zero-Price Economy – Note by the European Union' (2018) DAF/COMP/WD(2018)135 7, <<https://www.oecd.org/competition/quality-considerations-in-the-zero-price-economy.htm>> (accessed 17 October 2024).

⁴² M Luca, 'Designing Online Marketplaces: Trust and Reputation Mechanisms' (2017) 17 *Innovation Policy and the Economy*, 77.

and extended return periods demonstrate the distributive effects of pricing and contractual leverage. These practices shift financial or contractual burdens from one group of users to another without improving service quality or efficiency. For instance, when Apple offers below-cost or zero-price services to consumers, it typically recoups these losses from another user group or a connected service within the ecosystem. Similarly, when Amazon offers extended return periods to buyers, it imposes the corresponding financial and contractual burdens on retailers, such as cash flow challenges, increased operational expenses, inventory management issues, higher return rates and reduced profit margins.

In conclusion, the distributive effects of ecosystem power can lead to significant welfare imbalances, particularly when one user group – such as consumers – receives favourable treatment at the expense of others disproportionately. While these effects may align with the platform’s profit-maximisation objectives, they raise concerns about fairness in welfare distribution and the broader implications for ecosystem participants, particularly product and service providers with limited bargaining power against the platform. However, significant knowledge and regulatory gaps remain in how to assess the effect and legality of the use of pricing and contractual leverages within digital ecosystems.

4. ECOSYSTEM POWER UNDER COMPETITION LAW, CONTRACT LAW AND CONSUMER LAW

This section provides an overview of the legal assessment of the use of pricing and contractual leverages under EU competition law, as well as its intersection with contract law and consumer law. Firstly, it provides an analysis of the theory of harms of pricing and contractual leverages, a brief review of the existing legal tests applicable to pricing and contractual leverages, and an analysis of their shortcomings. Secondly, it addresses the intersection of competition law, contract law and consumer law, including their potential misalignment when involved in the exercise of ecosystem power.

4.1. ECOSYSTEM POWER UNDER COMPETITION LAW

4.1.1. Pricing leverage

Harms of pricing leverages can be both exclusionary and exploitative, especially when the ecosystem power is wielded together with the platform’s market power. When a platform exercises its ecosystem power through a non-neutral pricing structure, it often involves pricing below cost or even offering services free of charge to one side of the market and charging a higher price on the other to remain profitable. Such pricing leverages can cause both exclusionary harms, such as predatory pricing, and exploitative harms, such as excessive pricing, particularly when combined with the platform’s market power.

Under EU competition law, prices below the average variable cost (AVC) typically indicate predatory intent in a traditional one-sided market, while prices between AVC and average total cost require additional proof of intent.⁴³ As shown in *Google France*, the use of pricing leverages by dominant ecosystems can be inherently predatory, at least when viewed from the subsidised side. The Paris Commercial Court initially found Google’s free pricing strategy to constitute pricing predation in the mapping apps market because its zero price was below AVC.⁴⁴ However, the decision was overturned by the Paris Court of Appeals, which held that the revenues from the advertisement side of Google, which substantially exceed the costs, indicate a reasonable pricing structure.⁴⁵

The two decisions represent two approaches to market definition and price predation within ecosystems. One approach suggests separating Google’s markets, while the other defines a single market within which Google’s pricing structure should be evaluated. If separate markets are defined, the use of pricing leverages could be necessarily predatory on one side. In contrast,

⁴³ Case C-62/86 AKZO [1991] European Court of Justice (Fifth Chamber) EU:C:1991:286; Case C-333/94 P *Tetra Pak II* [1996] European Court of Justice (Fifth Chamber) EU:C:1996:436.

⁴⁴ *Google France* [2012] Tribunal de commerce de Paris 2009061231.

⁴⁵ *Google France* [2015] Cour d’appel de Paris 12/02931.

since a single-market definition enables an examination of overall profitability, it often suggests that such non-neutral pricing structure is not predatory.

With regard to excessive pricing in traditional one-sided markets, the legal test examines whether the price significantly exceeds its economic value and cost, and whether it is unfairly high compared to prices of competitors.⁴⁶ Similarly, the difficulty of assessing the excessiveness of pricing leverages lies in how to analyse the pricing structure in the context of multi-sided ecosystems. If the price is compared to the value and cost involved on the same side where the price is imposed, it is likely to be excessive because platforms have to offset their loss on the other side. If the price is compared to the overall value and cost involved on both sides, the pricing structure might seem reasonable.

When examining the risk of predatory and excessive pricing, the legal test for pricing leverages involves a thorough comparison of price, value and costs between the subsidised and priced sides. However, as shown above, the first challenge in evaluating these pricing structures lies in defining the relevant market. Given the intrinsic differences in the business models of transactional and non-transactional platforms, scholars have argued that two-sided non-transaction markets should be defined as two separate but interrelated markets, whereas two-sided transaction markets should be defined as one single market.⁴⁷ The Commission, by contrast, suggested defining separate markets ‘where there are significant differences in the substitution possibilities on the different sides of the platform’.⁴⁸ In its revised Market Definition Notice, the Commission primarily assesses four factors: (1) substitutable supply differentiation, (2) product differentiation, (3) multi-homing and (4) direct transactions.⁴⁹

In *Google Android*, the General Court addressed market definition within digital ecosystems, supporting the Commission’s approach in defining four distinct but interconnected markets for Google. In particular, the Commission defined one of these markets as the worldwide market (excluding China) for the licensing of smart mobile OSs without separating the market for Android device users and the market for app developers. In defining this market, the Commission took into account both sides: Android users’ loyalty to the operating system, their sensitivity to operating system quality, and switching costs, as well as app developers’ behaviours – suggesting a single-market approach.

In addition to the inherent difficulty of defining relevant markets, another challenge in applying the legal test for pricing leverage lies in addressing welfare distribution among ecosystem participants when a single market is defined. If the pricing structure is assessed by considering both the subsidised and priced sides, the legal test may suggest that a high price is reasonable due to the free service provided to another user group. However, this approach risks justifying exploitation of product and service providers – particularly small businesses and gig workers that are economically dependent on the ecosystem – if such exploitation is deemed acceptable by the benefits offered to consumers.

4.1.2. Contractual leverage

Similar to pricing leverage, contractual leverage can also result in both exploitative and exclusionary harm. When a dominant ecosystem commands a substantial customer base and offers consumers highly favourable terms which smaller ecosystems cannot afford due to their limited market sizes, such practices can produce exclusionary effects on external competitors while creating exploitative effects for other users who absorb the contractual burdens shifted away from consumers. However, due to the limited literature and case law addressing this possibility, along with the difficulty of proving predatory intent, the exclusionary effect of contractual leverages remains largely theoretical.

⁴⁶ *United Brands* (n 19); Case C-177/16 AKKA/LAA [2017] European Court of Justice (Second Chamber) EU:C:2017:689.

⁴⁷ D. Evans & M. Noel, ‘The Analysis of Mergers That Involve Multisided Platform Businesses’ (2008) 4 *Journal of Competition Law and Economics*, 663; L. Filistrucchi et al., ‘Mergers in Two-Sided Markets – A Report to the NMA’ (Nederlandse Mededingingsautoriteit, 2010), 136.

⁴⁸ European Commission, ‘Commission Notice on the Definition of the Relevant Market for the Purposes of Union Competition Law’, C/2024/1645, para 95, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AC_202401645> (accessed 17 October 2024).

⁴⁹ *ibid.*

Under EU competition law, the assessment of exploitative effects of contractual leverages is intricately tied to the unfairness of the contractual arrangements which aligns closely with a proportionality assessment: establishing the restrictive effects,⁵⁰ followed by an assessment of its necessity for achieving the objective.⁵¹

As illustrated by *BRT v SABAM* and two recent antitrust investigations against Apple, assessing the unfairness of contractual terms and policies requires first identifying the restrictions or harm they impose on users, e.g., restriction of authors' freedom to dispose of their works,⁵² restriction of the ability of developers to inform users of alternative purchasing possibilities outside of apps⁵³ or restriction of the freedom of dating-app providers to choose payment systems.⁵⁴ In the context of contractual leverages within ecosystems, such restrictions typically manifest themselves as restrictions of freedom of business operation, resulting in negative economic and operational effects, such as reduced profits or increased costs.

For these restrictive effects to be fair, they must be necessary to achieve the objectives of the non-neutral contractual structure.⁵⁵ Specifically, under contractual leverages, platforms often justify their strict policies on product and service providers with the objective of consumer welfare protection. For example, Amazon openly declares its ambition to 'be Earth's most customer-centric company'.⁵⁶ On its webpages for the A-to-Z Guarantee, Amazon states that these policies are formulated with the intention of safeguarding the interests of its buyers.⁵⁷ Another example is Zalando. In an interview conducted by *Les Echos* with Jonathan Trépo, the director of Zalando France emphasised the long-term value of loyal buyers and underscored the instrumental role of the free-return policy in fostering customer satisfaction and loyalty.⁵⁸

This proportionality analysis becomes even more complex when considering the implications of market definition. Similar to pricing leverages, the definition of the relevant market can significantly influence the assessment of contractual fairness, particularly concerning the relevance of objectives and the examination of necessity. If separate markets are defined, the objective of consumer welfare protection is unlikely to be relevant for the examination of the fairness of terms and policies imposed on product and service providers. As the ECJ stated in the *MasterCard* judgment:

Where, as in the present case, restrictive effects have been found on only one market of a two-sided system, the advantages flowing from the restrictive measure on a separate but connected market also associated with that system cannot, in themselves, be of such a character as to compensate for the disadvantages resulting from that measure in the absence of any proof of the existence of appreciable objective advantages attributable to that measure in the relevant market ... where the consumers on those markets are not substantially the same.⁵⁹

However, whether benefits to consumers in a single-market definition can justify restrictive effects on other user groups remains unclear, as no EU competition law case has directly addressed this issue. There are, nevertheless, a few academic discussions on the topic. Focusing

⁵⁰ Case C-127/73 *BRT v SABAM* [1974] European Court of Justice, EU:C:1974:25, 8; European Commission, 'Antitrust: Commission Opens Investigations into Apple', 16 June 2020, <https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1073> (accessed 20 June 2023); Netherlands Authority for Consumers and Markets (ACM) (n 7), para 16.

⁵¹ *BRT v SABAM* (n 50), para 15.

⁵² *ibid*, para 8.

⁵³ European Commission, 'Commission Opens Investigations into Apple' (n 50).

⁵⁴ Netherlands Authority for Consumers and Markets (ACM) (n 7), para 16.

⁵⁵ *BRT v SABAM* (n 50), para 15.

⁵⁶ Amazon, 'Amazon Strives to Be Earth's Most Customer-Centric Company, Where People Can Find and Discover the Widest Possible Selection of Safe Goods', *Amazon and Product Safety*, 1 June 2022, <<https://www.aboutamazon.eu/news/policy/amazon-and-product-safety>> (accessed 4 August 2023).

⁵⁷ Amazon.com.be, 'A-to-Z Guarantee' <<https://www.amazon.com.be/gp/help/customer/display.html?nodeId=GQ37ZCNECJKTIFYQV>> (accessed 1 June 2023).

⁵⁸ P Houédé, 'Zalando poursuit sa croissance rapide au détriment de ses marges', *Les Echos*, 17 January 2018, <<https://www.lesechos.fr/2018/01/zalando-poursuit-sa-croissance-rapide-au-detrimet-de-ses-marges-982104>> (accessed 4 August 2023).

⁵⁹ *MasterCard* (n 15), para 242.

on the overall welfare of all sides of the ecosystem, the ‘net-effects analysis’ approach posits that the restrictive effect on a specific user group is reasonable, provided that there is no less restrictive measure and that such restriction can be counterbalanced by benefits to another user group.⁶⁰ On the contrary, the ‘separate-effects analysis’ approach requires the assessment of necessity and the comparison of restrictions and benefits within the same user group or the same side of the ecosystem, which can better ensure a fair distribution of burdens and welfare among users.⁶¹

Overall, the uncertainty and shortcomings of the legal test for contractual leverages within ecosystems under EU competition law are similar to those for pricing leverages. Market definition directly affects the relevance of the objective and the framework within which the restrictive effects are evaluated, especially when benefits and harms are experienced by different user groups or market sides. Meanwhile, it is not entirely clear if contractual disadvantages arising from one side of the market can be offset by the advantages received by the other side. While the multiple market approach has shown more potential in balancing the interests of different user groups within ecosystems and regulating unfair monetary and contractual exploitation of users, the single-market approach more effectively captures the interdependencies and network effects within ecosystems, providing a clearer view of competition dynamics across interconnected services.

4.2. INTERSECTION OF COMPETITION LAW, CONSUMER LAW AND CONTRACT LAW

Besides competition law, the examination of ecosystem power also intersects with contract law and consumer law due to the multiple relationships within ecosystems. Contract law governs B2C, P2B and P2C relationships, while consumer law addresses P2C and B2C relationships. This creates potential conflicts when assessing pricing and contractual leverages.

The Digital Markets Act (DMA), while primarily targeting competition law objectives such as enhancing contestability within platform ecosystems, also intersects with consumer law by promoting consumer welfare and with contract law by addressing unfair practices in P2B contracts. However, the DMA’s focus is predominantly on preventing exclusionary terms and practices, such as self-preferencing, combining personal data without consent and restricting switching or unsubscribing.⁶² Despite its overly restrictive scope due to the strict requirements on annual turnover and active users,⁶³ the DMA’s provisions on unfair terms and practices (e.g., disproportionate conditions for terminating the provision) are designed to address bilateral P2B and P2C relationships, leaving broader welfare distribution concerns within ecosystems unaddressed.⁶⁴

The Unfair Contract Terms Directive (UCTD) – as part of EU consumer law but also operating within the broader framework of contract law – provides the legal framework for assessing the unfairness of terms in B2C contracts. Articles 3(1) and 3(3) of the UCTD stipulate that a non-negotiated term is unfair if it breaches the requirement of good faith, causing significant imbalance in the rights and obligations of the parties to the detriment of the consumer.⁶⁵ However, as Article 4(2) exempts ‘core terms’ – those relating to the main subject matter or the adequacy of price and remuneration – from this fairness assessment,⁶⁶ pricing leverages, such as commission fees or service charges, may fall under ‘core terms’ and thus escape unfairness scrutiny.

⁶⁰ M Katz & J Sallet, ‘Multisided Platforms and Antitrust Enforcement’ (2018) 127 *Yale Law Journal*, 2142, 2145.

⁶¹ *ibid.*

⁶² Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act), Arts 5, 6 and 7.

⁶³ *ibid.*, Art 3.

⁶⁴ *ibid.*, Art 6.

⁶⁵ Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts (UTCD), OJ L 95, 21.4.1993, Art 3.

⁶⁶ Case C-26/13 *Kásler and Káslerné Rábai* [2014] European Court of Justice of First Instance (Fourth Chamber) ECLI:EU:C:2014:282, 43–55; Case C-421/14 *Banco Primus SA v Jesús Gutiérrez García* [2017] European Court of Justice (Fifth Chamber) ECLI:EU:C:2017:60, 62; C-49/14 *Finanmadrid EFC SA v Jesús Vicente Albán Zambrano and Others* [2016] European Court of Justice (Fifth Chamber) ECLI:EU:C:2016:98, 30.

While the UCTD aims to address imbalances in consumer contracts, its limitations become apparent in the context of multi-sided digital ecosystems. The policy objective of the UCTD is to safeguard consumer welfare, based on the assumption that consumers lack bargaining power and knowledge compared to sellers or suppliers.⁶⁷ Consequently, assessments under the UCTD may justify platforms' use of pricing and contractual leverages, as these practices often produce positive effects in the bilateral P2C relationship by favouring end-consumers within ecosystems. However, this narrow focus on consumer welfare fails to consider the broader ecosystem dynamics, particularly the economic impact on product and service providers, whose financial losses and operational burdens, while substantial, fall outside the scope of bilateral P2C assessments under the UCTD.

Unfortunately, the EU legal framework does not establish substantive criteria for assessing the unfairness of terms in B2B or P2B contracts. While the Unfair Trading Practices Directive (UTPD) prohibits specific practices, such as late payments and unilateral contract changes, it does not provide a general framework for assessing fairness outside the listed practices.⁶⁸ Furthermore, the UTPD applies specifically to buyers and suppliers in the agricultural and food supply chain, limiting its relevance to digital ecosystems. In the same vein, Regulation (EU) 2019/1150 (P2B Regulation) prioritises transparency in T&Cs, fairness in trading practices and effective redress mechanisms in P2B relationships, but it does not introduce a legal standard for assessing the substantive fairness of terms in P2B contracts.⁶⁹

In conclusion, under the current EU legal framework, competition law appears to be the most suitable tool for addressing ecosystem power and defining the legal boundaries for the use of pricing and contractual leverage. Although contract and consumer law play a role, they are not equipped to address the complex, multi-sided relationships within ecosystems due to the UCTD's narrow focus on consumer welfare in B2C contracts and the lack of a clear legal standard for assessing fairness in B2B contracts at the EU level. This makes competition law the most viable framework for addressing the broader and more complex power dynamics in digital ecosystems.

4.3. AN APPROACH TOWARDS DISTRIBUTIVE EQUITY

While competition law and consumer protection are often assumed to be mutually reinforcing,⁷⁰ this paper suggests that an exclusive focus on consumer welfare may result in disproportionate exploitation of product and service providers, particularly small businesses and gig workers within ecosystems, where these groups are also disadvantaged vis-à-vis the platform. This gap is partially acknowledged by the P2B Regulation and the DMA, both of which recognise the power asymmetry between platforms and business users. However, the distributive function of ecosystem power remains underexplored in scholarship, legislation and antitrust enforcement, particularly regarding the boundaries of extending consumer welfare at the expense of other users within ecosystems.

This paper argues that assessing pricing and contractual leverages and regulating the ecosystem power of digital platforms do not require complicating market definition with normative considerations, as such assessments are inherently objective and economic. Instead, the focus should be on preventing the disproportionate exploitation of users once a single market has been defined. To achieve this, a more egalitarian approach – focused on balancing the interests of all user groups – might be required when assessing the harms of pricing and contractual leverages employed by dominant platforms, particularly in cases where benefits and harms are distributed unevenly and disproportionately across different user groups or market sides. This approach can be particularly suited to addressing ecosystem power because it directly engages with the distributive function of ecosystem power, as developed in Section 3.3. It reflects the realities of digital ecosystems, where benefits to one group are often achieved

⁶⁷ Case C-240/98, C-243/98, C-244/98 *Océano* [2000] European Court of Justice ECLI:EU:C:2000:346, 25.

⁶⁸ Directive (EU) 2019/633 of the European Parliament and of the Council of 17 April 2019 on unfair trading practices in business-to-business relationships in the agricultural and food supply chain (UTPD).

⁶⁹ Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services (P2B Regulation), 57.

⁷⁰ K. Cseres, *Competition Law and Consumer Protection* (Kluwer Law International, 2005).

through detriments to another, and seeks to prevent disproportionate exploitation without undermining the overall functionality and innovation of the ecosystem.

Incorporating distributive equity into antitrust enforcement allows competition authorities to target exploitative practices and non-neutral pricing or contractual structures without overcomplicating enforcement mechanisms or redefining markets. Competition authorities can promote distributive equity by ensuring fairness and proportionality in the distribution of welfare among ecosystem participants through reviews of pricing and contractual frameworks in dominant ecosystems. If *prima facie* evidence of exploitation or non-neutral pricing and contractual structures is identified, authorities can intervene through investigations. Furthermore, competition authorities can promote the development of voluntary codes of conduct established by platform operators and ecosystem stakeholders. These codes could address issues such as fair return policies and equal access to platform services.

5. CONCLUSION

Building on existing literature, this paper distinguishes ecosystem power from market power and bargaining power, emphasising its inwardly-directed nature and distributive effects. Unlike traditional market power, which focuses on external competition, and bargaining power, which examines bilateral relationships, ecosystem power operates within the multiple relationships of an ecosystem, shaping pricing and contractual structures and determining the distribution of welfare among multiple stakeholders. This conceptualisation bridges gaps in understanding the unique dynamics of digital ecosystems, expanding the analytical framework by highlighting the interplay between ecosystem power, market power and bargaining power. However, as the concept of ecosystem power is still emerging, its practical application in enforcement remains underdeveloped. The theoretical framework presented in this paper would benefit from further refinement through empirical validation and engagement with policymakers and other stakeholders.

This paper identifies pricing and contractual leverages as central mechanisms through which ecosystem power is exercised. Non-neutral pricing structures, such as cross-subsidisation, and contractual arrangements, such as standardised linked contracts or algorithmic management, enable platforms to exploit economically dependent user groups while favouring other users – often consumers. By focusing on the distributive consequences of these practices and their limited contribution to overall welfare, this paper differentiates these mechanisms from quality competition. Future research should investigate whether these mechanisms foster innovation or stifle it by disproportionately burdening economically dependent user groups.

The shortcomings of the current EU legal framework for regulating ecosystem power are brought into focus. Competition law, while more effective at addressing external relationships, lacks mechanisms to oversee the internal dynamics and welfare distribution within ecosystems, particularly in cases where pricing and contractual leverages result in exploitation of certain users. Meanwhile, consumer law and contract law lack effective mechanisms to protect product and service providers, especially small businesses and gig workers within ecosystems that are disadvantaged *vis-à-vis* the platform. The UCTD, for instance, narrowly focuses on consumer welfare and excludes ‘core terms’ from its fairness assessments, leaving pricing leverages outside its scope. Similarly, while the P2B Regulation promotes transparency and fairness, it does not provide substantive criteria for evaluating the fairness of contractual terms. These gaps in the current framework underscore the need for a more holistic approach to regulation – one that considers both internal ecosystem dynamics and the broader distribution of welfare.

Recognising these gaps, this paper introduces the concept of distributive equity as an additional consideration in regulating ecosystem power in antitrust enforcement. Distributive equity focuses on the equitable and proportionate distribution of financial and contractual burdens across ecosystem participants. By ensuring that no single group disproportionately bears the costs of an ecosystem’s operation, this approach directly addresses the distributive function of ecosystem power. By encouraging competition authorities to oversee welfare distribution and intervene in cases of disproportionate exploitation, the concept offers a way to mitigate some of the imbalances inherent in platform ecosystems.

However, establishing a benchmark for what constitutes a fair distribution of burdens and welfare is inherently complex and context-dependent. Measuring distributive equity quantitatively across multiple user groups is equally challenging, given the multi-sided nature of ecosystems. Moreover, integrating distributive equity into EU competition law, which traditionally focuses on market efficiency and consumer welfare, risks resistance from policymakers, antitrust agencies, courts and scholars. Expanding competition law to encompass distributive equity raises fundamental questions about the role of antitrust enforcement in addressing equity and fairness beyond traditional economic concerns.

Despite these challenges, distributive equity provides a complementary perspective to the consumer welfare standard. While the consumer welfare standard prioritises outcomes that benefit consumers, distributive equity recognises that such gains can often come at the expense of other ecosystem participants, such as product and service providers. This approach invites further research into how distributive equity interacts with existing welfare standards and whether they can coexist or require integration.

In conclusion, this paper's contribution lies in advancing the discourse on regulating digital ecosystems. By conceptualising ecosystem power and distinguishing it from market power, this paper deepens our understanding of how platforms operate and influence welfare distribution within ecosystems. The identification of pricing and contractual leverages as mechanisms of ecosystem power provides a tangible framework for analysing these dynamics. Furthermore, the critique of existing legal frameworks highlights the need for reform to address the unique challenges posed by platform ecosystems. This paper also stresses the importance of balancing consumer welfare with the interests of other ecosystem participants. While consumer welfare remains a cornerstone of competition law and consumer law, the paper argues that it should not be pursued at the expense of other user groups, particularly those economically dependent on platforms. By introducing distributive equity as a further consideration, this paper calls for a more inclusive approach to antitrust enforcement that reflects the realities of platform ecosystems.

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