The Regulation of Dark Patterns By Competition Law: A Cross Jurisdictional Analysis with Insights from Indian Jurisprudence

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Abstract

This decade has witnessed a steep hike in the use of deceptive and manipulative design techniques, broadly referred to as "dark patterns". The purpose of such patterns is to play on consumer biases and coax consumers into decisions that they may not have otherwise taken, especially where such decisions entail negative consequences. To address this concern, there has been development of laws which prohibit the usage of dark patterns, including consumer, advertising and data protection laws. However, the jurisprudence in this regard is piecemeal. Dark patterns are an intrinsic feature of digital markets, and competition authorities too are addressing such practices, without calling them out as dark patterns. In this paper the authors conduct a cross jurisdictional examination of laws regulating dark patterns and point out the need for specific competition law regulation of dark patterns in India.

Keywords: *Dark patterns, consumer behaviour, competition law, digital markets.*

1. Introduction

Competition law enforcers are facing an urgent need to adopt regulatory approaches that protect digital users, while promoting a healthy business ecosystem. Dark patterns are a contemporary, yet underplayed concern in digital markets. As countries move towards better AI governance, self-

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Note: The study adhered to accepted ethical practices and standards of research integrity throughout the research process.

audits and transparency, competition remedies will be left incomplete if dark patterns are not specifically called out as antitrust violations.

The first part of the paper contains the introduction and the literature review. The second part of the paper starts with understanding consumer rationality and consumer bias through the lens of behavioral economics. Here the authors discuss the evolution of economic theories governing human choice behaviour, including bounded rationality, the conditional logit model, the prospect theory and the growing relevance of behavioral factors in digital platforms and competition law.

The third part of the paper explains dark patterns and how they play on consumer bias. As dark patterns are constantly evolving, a complete categorization of the same is unfeasible. However, to explain and establish the use of dark patterns, the authors have categorized dark patterns as identified by existing legal scholarship.

The fourth part describes the intersection of dark patterns with competition law. Here the authors discuss how dark patterns go beyond mere persuasion and translate into coercion. This part specifically highlights the challenges in regulation of dark patterns by competition law. In the fifth part of the paper, the authors undertake a cross-jurisdictional analysis of the legal frameworks regulating dark patterns in US, EU, Japan and India, including cases, where such patterns have been used, but not called out directly by competition law. Recent developments indicate that there is potential for dark patterns to be regulated under Indian competition law, specifically, with the explicit discussion of dark patterns in the decision of the NCLAT in *WhatsApp LLC v. CCI* (2025, para.190).

The sixth and last part presents the findings of the research paper and suggests approaches that can bridge the regulatory gap on the subject.

1.1 Literature Review

According to a recent report, consumers in India are estimated to be losing around ₹28,000 crore annually due to dark patterns, and a large proportion continue to be misled even when they are aware such patterns exist (The Hindu, 2026). Explaining why persuasion of this kind succeeds is the task with which this paper begins, and the explanation lies in behavioral economics rather than in the classical assumption of the rational consumer. The starting point is Herbert Simon's theory of "bounded rationality" developed in his seminal 1955 article in the Quarterly Journal of Economics, which challenged the assumption that consumers reason with unlimited computational and informational capacity (Simon, 1955). Seventy years on, the theory has grown in relevance.

Giarlotta and Petralia (2024) trace the many directions in which Simon's original insight has travelled; the Stanford Encyclopedia of Philosophy situates his analytical model of realistic choice as the foundational break from the classical model of economic man (Wheeler, 2024); and Mallard (2018) offers a critical, comprehensive analysis of bounded rationality and behavioral economics, urging greater coherence between the two fields. This body of scholarship establishes bounded rationality as settled theoretical ground, robust enough to carry a regulatory argument. Indian policy discourse has already begun to draw on this ground. Indian regulators are increasingly relying on behavioral economics for policy design (Ministry of Finance, 2019), and Badhani (2024) has situated cognitive bias specifically within Indian policymaking. What this literature has not yet done, and what this paper sets out to do, is carry that behavioral lens specifically into Indian competition law.

Bounded rationality is only the starting premise. The literature that follows it explains more precisely how and why consumers deviate from rational choice, and it is this finer-grained understanding that the paper draws on to explain how digital design can predictably steer consumer decisions. Gomes (2005) traces these deviations from the rational-actor paradigm; McFadden's conditional logit model (1974) demonstrates that the characteristics of the choices on offer, and not merely the preferences of the chooser, shape the decision made; Kahneman and Tversky's prospect theory (1979) shows that choice under uncertainty departs systematically from mathematical accuracy; and Tversky and Kahneman's earlier work on heuristics and biases (1974) identifies the cognitive shortcuts consumers rely on in place of full information-processing. Read together, this literature supplies a framework for understanding not merely that consumers are imperfectly rational, but the specific, recurring forms of imperfection, which digital interfaces can anticipate and exploit. Schilling (2026) applies this framework to dark patterns, to analyze their effect on choice in digital platforms and argues for a correspondingly nuanced regulatory response. Of the literature surveyed here, Schilling's is closest to the present paper's own project, and the authors build on it by extending the analysis specifically into competition law.

Competition law has been slower than economics in shedding the assumption of the rational consumer, and bridging that gap in the Indian context, is the specific task this paper undertakes. A body of literature has documented the particular ways in which consumers depart from the 'rational actor' competition law has traditionally assumed, including the limits of willpower (Duivenvoorde, 2015), the departure from self-interest (Devlin & Jacobs, 2013), the mental shortcuts, or heuristics,

that consumers use in place of full information-processing (Conlisk, 1996), the cognitive biases that result (Waldman, 2020), and the exploitation of these biases through interface design to manufacture a faux decisional autonomy (Heick, 2019; Bunčić, Krstić & Kostić-Stanković, 2021). Read together, this literature shows why the rational-actor assumption is difficult to sustain in digital markets, and it grounds the case made throughout this paper that the Competition Commission of India cannot leave this gap unaddressed.

The final piece is the literature that names and classifies dark patterns, on which the authors' taxonomy in Part 3 draws directly (Brignull, 2023; OECD, 2022). This, along with judicial precedents from India and other jurisdictions, establish that dark patterns cause loss of consumer autonomy that goes beyond persuasion, and may be a competition concern in its own right. Comparatively little of this scholarship, however, connects dark patterns explicitly to competition law: Brenncke (2024) and Marty and Torregrossa (2023) are among the few to do so, and it is this thin connection that the present paper seeks to thicken, with specific reference to India. The timing for doing so is apt. The NCLAT's recent decision in the competition law case- WhatsApp LLC v. CCI (2025) - has addressed dark patterns as a form of coercive choice architecture, and Indian law and economics scholarship offers an early sense of what a fuller doctrinal response could look like, particularly its calls for behavioral audits and more nuanced regulatory and judicial reasoning (Ministry of Finance, 2019; Badhani, 2024; Sikri, 2024). It is by drawing these strands together- the theoretical grounding in bounded rationality and behavioral economics, the still-thin scholarship connecting dark patterns to competition law, and India's own emerging judicial and policy engagement with the issue – that the paper builds the case for a dedicated competition law response to dark patterns in India.

2. Understanding Consumer Bias through Behavioral Economics

A fundamental issue in economics has been understanding human choice behaviour. At the origin of economic sciences, human behaviour was considered to be largely rational. Economists hoisted their theories on the assumption that one's desire for goods and services would exceed their ability to pay, forcing them to make '*choices*' which served their best interest. This 'rationality principle' finds its place earliest in Smith's Wealth of Nations, through the example of a hunter who is skilled at making bows and arrows, "*He frequently exchanges them for cattle or for venison, with his companions; and he finds at last that he can, in this manner, get more cattle and venison, than if*

he himself went to the field to catch them. From a regard to his own interest, therefore, the making of bows and arrows grows to be his chief business.." (Smith, 1982).

2.1 Theory of Bounded Rationality

However, with the passage of time, the idea of human behaviour as rational, began to be reconsidered. In the 1980s and 90s, economic studies demonstrated all is not right with the rational actor paradigm (Huck, Zhou & Duke, 2011).

Herbert A. Simon coined the term 'bounded rationality' which introduced the notion that consumers are mostly rational but there are deviations from rational behaviour (Gomes, 2005).

The theory of bounded rationality is epistemic to understand consumer rationality and decision making. It has a significant contribution in the growth of behavioral economics. This theory encapsulates behaviour that rejects the notion of perfect rationality assumed by the classical model of economic man (Wheeler, 2024). Aware of the gap between economic theory and findings in empirical studies, Simon did not reproduce the progress in psychology on human rational behaviour. Rather, he suggested a realistic rational choice model, analytical in nature, that took into account limitations of computation and information related capacity, affecting a decision maker's perception in multiple situations (Giarlotta & Petralia, 2024). This is a novel formulation of choice and the authors emphasize on his work for the regulators to understand consumer behaviour in digital interfaces. Recent scholarly works from Schilling, Mallard, Wheeler, Giarlotta and Petralia have given analytical explanations to Simon's work (Schilling, 2026; Mallard, 2018; Wheeler, 2024; Giarlotta and Petralia, 2024). They enlist and illustrate the advancements in Simon's work to the present issues of consumer decision making, like dark patterns in digital platforms. They further advocate for an integrated and nuanced application of the bounded rationality theory and behavioral economics, seconded by the authors in this study.

Later on, Simon's theory was further deepened by the contributions of Daniel L. McFadden (1974) with his 'conditional logit model' which provided the theory and method for analyzing choices between two or more discrete alternatives (McFadden, 1974). Daniel Kahneman and Amos Tversky (1979) in their work on 'prospect theory' or decision making under uncertainty (Kahneman & Tversky, 1979). These works paved the way for 'irrational' behaviour of consumers and considering the psychological aspects behind them (Gomes, 2005).

2.2. Behavioral Economics and Competition Law

Contrary to the field of economics, Competition law, although built on the same foundations of 'rational actor' and 'rational choice' theory, initially remained unperturbed with the inclusion of 'irrationality' (Leslie, 2010). However, the assumption that consumers have well defined preferences and make rational decisions, based on those preferences is flawed. Consumers may have cognitive limitations which make comparison between products and prices more difficult, or they may display a range of behavioral biases. Therefore, scholars advocate a more 'realistic theory of decision making' based on behavioral economics, where economic actors work under realities of bounded rationality, limited will power (Duivenvoorde, 2015) and deviation from self-interest (Devlin & Jacobs, 2013). Recent cases illustrate a growing recognition among competition authorities of the importance of behavioral factors in digital markets, acknowledging that consumer behaviour can significantly impact market dynamics and competition (See *U.S. et al. v. Google, LLC*, 2024; *Google & Alphabet v. Commission*, 2017; *The Hindu*, 2024, September 13).

At the outset, it is important to address why consumers do not make the best choice for themselves (Lanneau, 2021). Consumers often take more irrational decisions than rational (Duivenvoorde, 2015) and these decisions may be influenced by many factors, including how the information is provided, whether there's informational overload, how high is the information cost, difficulties of "*attention, encoding and comprehension, inference*, as well as in the *response processes"* faced while processing information (Duivenvoorde, 2015). People often see what they expect to see rather than observing objectively. Research shows that consumers often misinterpret 20-25% of material meanings they see in TV ads or read in magazines, while virtually 100% misinterpret at least some part of the communication (Duivenvoorde, 2015). These typical and predictable irrational thought processes and results thereof, are called *cognitive biases* (Duivenvoorde, 2015; Waldman, 2020).

Further, consumers may not have the cognitive abilities or full information to make an informed choice, so they develop mental shortcuts called *heuristics* or rules of thumb (Conlisk, 1996). For instance, one might assess the risk of heart attack among middle aged people by recounting similar accidents amongst acquaintances, or evaluate the possibility of a business venture failing by envisioning the difficulties it might encounter. This implies that rather than objective assessment, consumers would rather go with available information that can be quickly recalled, and make decisions accordingly (Tversky & Kahneman, 1974). Over time these mental shortcuts may lead to structurally incurring cognitive errors in decision making, arriving at the issue of the role of

biases in competition. Once such biases are recognized by firms, they can be used to construct designs that manipulate consumers into choosing a targeted option through *faux* decisional autonomy (Heick, 2019; Bunčić, Krstić & Kostić-Stanković, 2021). Firms then can retain customers not because of superior product quality, but because the transaction cost of exit exceeds the cognitive reserve of the user.

3. What are Dark Patterns and How do they play on Consumer Bias?

3.1 Theorizing 'Darkness' in Dark Patterns

The first classification of "dark patterns" was made in 2010 by Harry Brignull, who described these patterns as interfaces designed for users to be tricked into doing something that they would have not done otherwise (Brignull, 2023). More recent definitions describe the term dark pattern as a "user interface that substantially subverts or impairs user autonomy, decision making, or choice, regardless of a business's intent." (The California Consumer Privacy Act, 2018, s. 1978.140). They are not merely mistakes but are carefully curated with a strong knowledge of human psychology, without keeping the interest of the user in mind (Mathur & Mayer, 2021).

The Organisation for Economic Co-operation and Development (***OECD***) Committee on Consumer Policy has described dark commercial patterns as (OECD, 2022):

[B]usiness practices employing elements of digital choice architecture, in particular in online user interfaces, that subvert or impair consumer autonomy, decision-making or choice. They often deceive, coerce or manipulate consumers and are likely to cause direct or indirect consumer detriment in various ways, though it may be difficult or impossible to measure such detriment in many instances (OECD, 2022).

The harshest feature of dark patterns is loss of autonomy in consumer decision making (Australian Competition and Consumer Commission [ACCC], 2022). In India, the decision by the National Company Law Appellate Tribunal (NCLAT) in *WhatsApp LLC v. CCI & Ors.* (2025) has explicitly discussed dark patterns as "choice architecture" or "…design tricks (that) can coerce users into accepting terms that a truly competitive process might not produce", by leveraging status quo bias to trick users into providing consent, striking at the voluntariness of consent obtained (*WhatsApp LLC v. CCI & Ors.*, 2025, para. 190). Therefore, the discourse on dark patterns in India is now being recognized by courts in the antitrust context.

3.2 Types of Dark Patterns

Dark patterns constitute a variety of practices and are constantly evolving. The table below describes some commonly used dark patterns:

Type of Dark Pattern	**Cognitive Bias**	**Consumer Behaviour Illustrations**
Sneaking	disguises relevant information	Unwanted subscription or insurance added to shopping basket (Gray et al., 2024).
Bait and Switch	subverting desired results (Gray et al., 2024)	Software apparently free, requires payment shortly after installation
False Urgency/Countdown Timer	fear of missing out (Westin & Chiasson, 2019)	Countdown timer (Gray et al., 2024).
Activity Messages and Disguised Advertisements	Untrue message that others are viewing the same product	Guided to click on concealed advertisement ("Types of deceptive pattern", n.d.).
Forced registration/Forced disclosure	Seeking more information than needed	Requiring personal data before a purchase ("Forced action", n.d.).

Misdirection	Manipulative interface	§ **Confirmshaming** -"No, I'd rather pay the full price" (Guerrini & Wang, 2020). § **Tricky questions** -"if you want us to not send you promotional messages, don't check the box below" (Guerrini & Wang, 2020). § **Interface interference**-one choice looks bigger than the other (Gray et al., 2024) § **Pressured selling** -adding an expensive product, nudging (Luguri & Strahilevitz, 2021).
Testimonials/Fake Social Proof	Misleading testimonials	Considering others testimonials (Luguri & Strahilevitz, 2021).
Hidden/Hard to Cancel Subscription/Immortal Accounts/Obstruction	Automatic subscription or renewal of service	Difficulty in withdrawing, unable to delete data (Luguri & Strahilevitz, 2021).
Fake Scarcity/Low Stock Messages	Scarce availability	Possibility of soon being sold out, due to high demand (Luguri & Strahilevitz, 2021).
Drip-pricing	Revealing the full price later	Charging a higher amount at checkout (The Guidelines for Prevention and Regulation of Dark Patterns, 2023; OECD, 2022).

Forced action/Preselection	Default option pre-selected by provider	Forced consent to promotion offers or email subscriptions (Gray et al., 2018).

Table 1- Types of Dark Patterns with associated Cognitive Biases and Consumer Behaviour Illustrations

Source(s): Authors' construction adapted from various sources as cited

4. Intersection of Competition Law and Dark Patterns

In this section, the authors examine the intersection between competition law and dark patterns. The authors outline the competition issues that may arise due to the use of dark patterns by dominant firms and then move on to discuss the importance of data in digital markets and how dark patterns can lead to the erosion of privacy, which is an emerging competition concern. Finally, this section discusses the obstacles to the regulation of dark patterns by competition law.

4.1 Abuse of Dominance and Dark Patterns

a. Dark Patterns, Privacy and Competition Law

It can be argued that dark patterns do not have tangible anti-competitive effects, on the ground that they are mere persuasion tactics and help in personalization which can promote efficiency and improve consumer experience (Day and Stemler, 2020; Brenncke, 2024; Marty and Torregrossa (2023). Moreover, there is scant data on actual economic harm caused to consumers due to the employment of dark patterns (Newman, 2015). To look at the increase in consumption of products without any change in the price of the same, as a result of dark patterns, may be a case of oversimplification.

However, the authors put forward that dark patterns go far beyond persuasion and can subvert the decision-making power of the user, resulting in systematic exclusion of competition from the market. To the extent dark patterns are used by a dominant undertaking, these may be regulated by provisions relating to abuse of dominance under competition law. Enterprises, particularly those active in the digital space can use dark patterns to "*(i) exclude competition in digital markets; and then (ii) based on their market power, extract resources akin to restricting output in product markets"* (Day & Stemler, 2020).

Dark patterns may affect competition by hindering or disincentivizing the process of shopping and comparing offers. For instance, drip pricing (Rasch, Thöne and Wenzel, 2020), through reduced

price transparency, has been found to hinder consumers' ability to identify the lowest price (Rasch, Thöne and Wenzel, 2020). Other dark patterns may lock in consumers into existing services and hamper switching, such as the forced registration, hidden subscription and "hard to cancel" dark patterns (OECD, 2022). Dominant firms may use dark patterns to further entrench their dominance in the market. For example, dark patterns may be used to neutralise competitive threats (OECD, 2022) or control consumer behaviour (for instance, through the use of defaults) (Competition and Markets Authority, 2022), or to gather consumer data to offer personalised services that rivals, in absence of such data, cannot (OECD, 2020; Competition and Markets Authority, 2023). A dominant firm could also use dark patterns to leverage its position to obtain market power in a related or downstream market (Gomes, 2005). Dark patterns can also impede a consumer's ability to select the offerings of the best firms on their individual merit (Kemp, 2020; Zhong, 2024). Market efficiency can suffer in particular through the transaction costs involved in certain dark patterns (OECD, 2022), such as hard to cancel subscription traps, etc. (Morton and others, 2019). Further, competitive pressures may induce businesses to commonly use dark patterns in competition regimes where such patterns are not clearly prohibited (OECD 2022).

Dark patterns erode an essential aspect of privacy known as "decisional privacy." Since dark patterns are a form of online manipulation which affects decision making, users feel that their decisions are an exercise of their free will. When people think that they are making their own decisions, they effectively share contacts, locations, messages, photographs, and other personal information, freely. This results in giving dominant firms access to huge amounts of personal data (Day & Stemler, 2020). In digital markets, economies of scale and scope, as well as network effects, can be created by control over large volumes of data (Raychaudhuri, 2020). Most countries are developing mechanisms to deal with data protection issues which have a bearing on competition in the market. Notably, in India, the *WhatsApp* (2025) case has recognized privacy as an antitrust concern, acknowledging the economic value of data, even if the consumer benefits from a "free" product, and the potential anti-competitive effects that this data collection can have.

b. The Obstacles in Regulating Dark Patterns by Competition Law

There exist several obstacles in evaluating dark patterns as anti-competitive conduct, even if the same are recognized as having competition implications.

The first is that traditionally antitrust law focuses on economic benefit accrued to consumers, hence the courts may be quicker to pronounce liability on conduct that leads to restriction of output and charging of higher prices (Lao, 1998). Dark patterns may come in forms, which on the face of it, have little to do with prices, though they may coerce consumers into making unnecessary purchases at a later stage. This reliance of antitrust law on prices to measure consumer welfare has allowed several tech giants to escape violations in the past (Lao, 1998; Newman, 2019). It is only recently that regulations pertaining to digital platforms are focusing on non-price considerations and enhancing fairness, contestability and privacy in markets (Deutscher, 2022).

A second problem is with antitrust law's approach of being cautious in avoiding false positives. In antitrust law, a finding of a false positive (or a violation where there is none) is regarded to be more costly than the finding of a false negative. Even if these false negatives or "error costs" have not been elaborately discussed in antitrust cases, it is evident that courts are largely guided by this principle, which influences presumptions and burdens of proof in law (Hovenkamp, 2022). Though emerging regulations on digital platforms are advocating for a recalibration of this "error cost" framework by suggesting ex-ante regulation, the same has provoked considerable debate. Scholars argue that the potential costs of ex-ante regulation may outweigh the benefits by chilling innovation in platform markets (Chopra et al., 2023).

The third is the issue of network effects. Many see this as a chicken and egg problem – to gain a significant number of buyers a platform needs to attract a significant number of suppliers- again to attract enough suppliers a platform needs enough buyers (Hagiu & Rothman, 2016). Platforms do not operate like traditional markets and costs and prices here do not follow trajectories similar to traditional markets (Raychaudhuri, 2020). Market power based on network effects is difficult to build and may be a result of efficiency. Hence, it is important to tread carefully before applying "rule based" rather than "effects based" restrictions. This has been the approach of some regulators, including the Competition Commission of India, which has been cautious in regulating digital markets (Chopra et al., 2023).

Particularly in light of the decision of the SC in *CCI v. Schott Glass* (2025) which mandates an effects-based analysis for establishing abuse of dominance under Section 4 of the Competition Act, it is becoming increasingly difficult to rely solely on *ex post* enforcement mechanisms. An effects-based framework, by design, requires demonstrable market distortion or consumer harm, often identifiable only after the conduct has taken root. This creates a structural limitation in digital

markets. Specifically in contexts such as dark patterns, harm may crystallize rapidly due to network effects. Due to this, by the time measurable anti-competitive effects emerge, market power may already be entrenched and user choice meaningfully constrained.

5. The Legal Treatment of Dark Patterns: A Cross Jurisdictional Analysis

The legal treatment of dark patterns across the world is characterized by regulatory overlaps, as several legislations, including advertising laws, data protection laws, consumer and competition laws, regulate dark patterns. This section outlines the legal treatment of dark patterns in the US and the European Union, after which it briefly discusses its regulation in Japan. Finally, the paper moves on to analyze the legal treatment of dark patterns in India, to justify why specific competition law regulation of dark patterns may be required.

5.1 United States

The US Federal Trade Commission [FTC] has twin objectives of protecting competition and protecting consumers. Dark patterns are covered under Section 5 of the Federal Trade Commission Act (Federal Trade Commission Act, s. 5). This section empowers the FTC to act against firms which use unfair or deceptive trade practices, including dark patterns (Khan, 2023). In September 2022, the FTC issued a Staff Report (Competition Policy International, 2023) titled "Bringing Dark Patterns to Light" (FTC Bureau of Consumer Protection, 2022). It mentions cases in which the FTC scrutinized common dark patterns being followed by companies and indicates the compounding effect of dark patterns on consumer bias and competition (FTC Bureau of Consumer Protection, 2022).

US antitrust cases, however, have been examining non-price injuries arising due to consumer manipulation much before the term dark patterns gained prominence. For instance, in ***U.S. v. Microsoft Corporation*** (2001) Microsoft was charged with using anti-competitive terms in its software development agreements and license contracts, to illegally preserve its monopoly in the operating system market (Kobayashi & Wright, 2020). The court determined that Microsoft's actions, which involved requiring its customers to use "Internet Explorer" *by design*, created barriers to entry and protected Microsoft's monopoly power, hence constituted anti-competitive behaviour (See Patterson, 1997; see also Lopatka & Page, 2001).

In recent years, the US FTC has acted against several companies using online manipulative techniques in the digital space. However, most of these are not anti-trust cases (See *In the Matter*

of Epic Games, Inc.; Gorman et al., 2023; *FTC v. Age of Learning, Inc. (ABCmouse)*, 2020). With respect to antitrust, the recent decision in ***United States v. Google LLC*** (2025) underscores why dark patterns cannot be relegated solely to consumer protection law when deployed by dominant digital platforms. The court reaffirmed that Google's default search placements, which were secured through exclusive distribution agreements, foreclosed rivals by steering massive query volume to Google, thereby reinforcing its scale advantage (*United States v. Google LLC*, 2025). In this way, behavioral bias interacted with network effects to "freeze" the search market.

Further, the court declined to impose "choice screens" as a remedy (*United States v. Google LLC*, 2025). It reasoned that compelled product design interventions are disfavored and that there was insufficient evidence that presenting users with alternative options would meaningfully enhance competition among general search engines (*United States v. Google LLC*, 2025). Therefore, in digital markets, merely offering alternatives does not undo the competitive consequences of years of behavioral conditioning and steering.

Amongst the other recent cases dealing with dark patterns, the *Amazon* cases are significant. In ***FTC v. Amazon.com, Inc.,* (2023)**, Amazon was pulled up for deceiving customers into signing up for its Prime program without consent and making it hard to terminate the memberships. (*FTC v. Amazon.com, Inc.*, 2023). In this case, the Commission identified multiple dark patterns which impacted consumers, (US FTC, 2023) like the use of "***forced action***", "***interface interference***" (Gorman et al., 2023) "***obstruction***" or "***roach motel***" (Gorman et al., 2023) and lastly "***misdirection***" by use of "remind me later" and "keep my benefits" options, rather than a "continue to cancel" option for easy exit (Gorman et al., 2023).

In reply, Amazon questioned the FTC's flawed understanding of legal liability based on opaque characterizations of dark patterns (Nelson, 2024). Amazon also raised questions about the subjectivity surrounding the concept of coercion. Eventually, the FTC secured a settlement with Amazon worth $2.5 billion, comprising a $1 billion civil penalty and $1.5 billion in consumer redress (Nelson, 2024; Federal Trade Commission, 2025; *FTC v. Amazon.com, Inc.*, 2023).

In the **Amazon Antitrust case**, filed in September 2023, the issue of employment of dark patterns by Amazon was raised. The FTC and 17 State Attorneys General alleged that Amazon used a host of anticompetitive and unfair practices (including anti-discounting measures, degrading quality, degrading consumer shopping experience, over charging sellers and stifling innovation) to create entry barriers and illegally maintain its monopoly in the market (*Federal Trade Commission and*

Others v. Amazon.com Inc.). The compliant also contains allegations that "***while Amazon technically offers Prime Video on a standalone basis, Amazon successfully uses dark patterns and other manipulative design techniques to thwart most shoppers from actually being able to sign up for it***" (*Federal Trade Commission and Others v. Amazon.com Inc.*, para. 220).
However, due to the US government shutdown and other delays, the case has been stayed. (Robson & Mac, 2025).

5.2 European Union

In Europe, the Digital Services Act, 2022, defines dark patterns as "*practices that materially distort or impair, either on purpose or in effect, the ability of recipients of the service to make autonomous and informed choices or decisions*", focusing on user's free and informed consent in general (The Digital Services Act (DSA) - Regulation (EU) 2022/2065, 2022). The EU has further expanded its focus on dark patterns with a proposed Digital Fairness Act (The Digital Fairness Act). The new initiative aims to regulate certain deeper issues affecting online consumers, like digital contracts, dynamic pricing, addictive designs of digital products, misleading influencer marketing and unfair commercial practices related to dark patterns (The Digital Fairness Act).
With respect to competition law, the Digital Markets Act, 2022, [DMA] contains provisions which indirectly regulate dark patterns. Under the DMA, undertakings that meet certain criteria, causing them to have significant impact in the market, are designated as 'gatekeepers' (Digital Markets Act Regulation 2022, EU 2022/1925). Article 13(4) of the DMA prohibits gatekeepers from violating their obligations through the use of 'behavioral techniques or interface design' (Digital Markets Act Regulation 2022, EU 2022/1925). Articles 5 and 6 lay down obligations of gatekeepers to ensure transparency in their dealings with end users and business users, including restrictions on usage of consumer data, aggregating non-public data through click, search, view or voice, and limiting interoperability of users. It mandates gatekeepers to allow easy uninstallation of software applications and allow easy changes in default settings (Digital Markets Act Regulation 2022, EU 2022/1925).
Though the term "dark pattern" is of recent origin, the importance of behavioral biases in competition law has been considered by the European Commission much earlier. In the ***Microsoft Internet Explorer case*** (2009), the Commission preliminarily found that Microsoft had abused its dominant position by tying its web browser Internet Explorer with Windows (Case COMP/C-3/39.530 – Microsoft (Tying). The Commission held that such bundling harms competition

between competing web browsers and reduces consumer choice. The remedy in this case focused on consumer behaviour by way of binding commitments, requiring Microsoft to provide consumers with a choice screen that allowed them to select a browser from a provided list. Further, the presentation of choices on the screen were to be randomized and unbiased. Instead of mere unbundling, like in the previous Microsoft [Media Player] case (Case COMP/C-3/37.792) this idea of a "choice screen remedy" took into account actual consumer preferences (Economides & Lianos, 2011).

Recently, in the ***Google Android*** (2018) case, the Commission found that Google tied the Google Search app with its mobile app store, Play Store, and its mobile web browser, Google Chrome, with the Play Store and Google Search Apps. Moreover, consumer traffic was channelized towards Google's search engine through restrictions like exclusive pre-installation and led to status quo bias (CASE AT.40099-*Google Android*). Arguably, the choice architecture of search engines is a dark pattern (Kelly & Rubin, 2024). Following a finding of abuse, Google introduced a choice screen on all new Android phones and tablets in the European Economic Area (EEA) and the UK where the Google Search app is pre-installed (Android, 2023). Again, in the ***Google Shopping*** (2017) case, Google was found to be abusing its dominant position through preferencing its own shopping service as against other services in its general search page. The Commission found that users would not have frequently clicked on specialized search results, if not for the designed visibility, and imposed a hefty fine (*Google and Alphabet v. Commission*, 2017). The authors submit that this biased display of search is a dark pattern (Day & Stemler, 2020).

The ***Amazon Marketplace*** **and** ***Buy Box case*** (2022) involved investigations against Amazon for abuse of its dominant position, through the use of a self-preferencing algorithm and use of confidential third-party seller data. Sellers who used Amazon's fulfilment services received preferential treatment by being offered automatic eligibility into the Amazon Prime program and Amazon's Buy Box. Amazon's website enhanced their visibility as well as sales. When a consumer selected from a search result ranked on Buy Box, it was an algorithm influenced result (CASE AT.40462- Amazon Marketplace and AT.40703- Amazon Buy Box 2022). In a majority of cases, the consumers were found to have purchased the top ranked result on the interface (Hagens Berman, n.d.). As most customers preferred fast and free deliveries, access to Amazon Prime also influenced sales. To settle the above cases, Amazon has submitted commitments to change the design features (Hagens Berman, n.d.).

A parallel and particularly instructive development can be seen in the ***Meta Facebook Marketplace Case*** (2024) where Meta was found to have abused its dominant position by tying Facebook Marketplace to the core Facebook social networking service and by imposing unfair trading conditions on competing classified ad providers. By integrating Marketplace directly into Facebook's interface and leveraging users' dependence on the social network, Meta effectively channeled traffic towards its own service, thereby distorting competition (*Meta Platforms Inc. – Facebook Marketplace* Case AT.40684, 2024).

The Facebook Marketplace case assumes broader significance for future enforcement in the digital economy, as it recognizes that coercion need not take overt or traditional forms. Instead, it may manifest through subtle mechanisms such as nudging, interface design, and specifically, the deployment of dark patterns. Thus, a review of important European competition law cases shows that though competition authorities do not categorize, or use the nomenclature "dark patterns", they regulate similar practices under competition law.

5.3 Japan

Further insight is offered by a report of the Japan Fair Trade Commission, which examined the potential for analyzing dark patterns under the Japanese Antimonopoly Act (Japan Fair Trade Commission, 2025). The report concludes that the use of dark patterns may constitute "deceptive customer inducement" or an "abuse of superior bargaining position" under the Act. The report identifies 11 typical dark patterns and at the same time, adopts a measured approach, acknowledging that not all dark patterns fall within the scope of competition law (Japan Fair Trade Commission, 2025). In particular, practices that primarily involve the manipulation of consumers' emotions or psychological vulnerabilities – without clear exclusionary effects or competitive foreclosure – may escape antitrust scrutiny (Japan Fair Trade Commission, 2025).

This highlights both the strengths and the limitations of competition law as a tool to regulate dark patterns and emphasizes the need for complementary regulatory regimes to address forms of digital manipulation that do not directly translate into competitive harm. One must bear this in mind when proceeding to analyze the nature of practices that might be best regulated under competition law.

5.4 India

In India, dark patterns have been addressed by consumer protection, advertising, banking and insurance laws, and like Europe, have been indirectly regulated by competition law.

The Central Consumer Protection Authority, India's consumer protection regulator, has laid down the Guidelines on Dark Patterns, defining them as "*any practice/s or deceptive design pattern, designed to mislead or trick users to do something they did not want to do, by subverting or impairing consumer autonomy, decision-making or choice, leading to unfair trade practice, misleading advertisement, or violation of rights of the consumer*" (The Guidelines for Prevention and Regulation of Dark Patterns, 2023). Meanwhile, the Advertising Standards Council of India (ASCI), has published a discussion paper on dark patterns in 2022 (Advertising Standards Council of India, 2022) and issued "Guidelines on Deceptive Design Patterns in Advertising" *(ASCI Guidelines)* in 2023, to harmonize digital advertisements with the ASCI Code (ASCI Guidelines, 2023; see also (Obhan & Dutta, 2023). The apex financial regulator, Reserve Bank of India (RBI) and the insurance regulator, Insurance Regulatory and Development Authority of India (IRDAI) have also tightened regulation of dark patterns and mis-selling, indicating increased vigilance (Singh, 2026; Mandal, 2026).

As regards competition law, the National Company Law Appellate Tribunal (NCLAT) has explicitly recognized dark patterns in its decision in *WhatsApp LLC v. CCI* (2025) (explored in detail later), therefore making dark patterns relevant in the competition law domain.

The scope of the Competition Commission of India's (***CCI***) regulatory intervention has in recent years extended beyond pricing considerations to non-price considerations (Gupta & Bhushan, 2021). In 2023, the Committee on Digital Competition Law was constituted in India, to examine the need for *ex ante* regulation in digital markets. It released its report in March 2024, highlighting the unique features of digital markets which are characterized by network effects and multi-sidedness. Section 3(3) of the Digital Competition Bill designated an enterprise as a Systemically Significant Digital Enterprise if it has significant presence with respect to a Core Digital Service, on the basis of quantitative thresholds and factors like inter-linkage of the enterprise with multiple sides of market, barriers to entry, extent of lock-in, including behavioral bias and switching costs (Digital Competition Bill, 2024). However, due to opposition from various stakeholders, this bill has been withdrawn (Kaushik, 2025) and currently there is no digital competition law in India.

Meanwhile, the CCI has been deciding cases which involve the use of manipulative practices in the digital space. In ***Matrimony.com Ltd. v. Google*** (2018) the CCI found that Google held a dominant position in the online general web search and search advertising markets in India, as it formed a "*gateway to the internet"* for a vast majority of internet users (*Matrimony.com Ltd. v.*

Google, Case No. 07 & 30 of 2012). The primary allegation in this case was that Google was abusing its dominant position by favoring its *"own services and partners, through manually manipulating its search results to the advantage of its vertical partners"* (*Matrimony.com Ltd. v. Google*, Case No. 07 & 30 of 2012). The CCI also observed that the market power owing to large volumes of personal data can deter innovation and harm consumer welfare (*Matrimony.com Ltd. v. Google*, Case No. 07 & 30 of 2012). However, this order was criticized on grounds of lack of evidence of consumer harm, as there was no actual analysis of user's clicking behaviour in India (Muralidharan, 2018). The authors argue that the practice of creating a deceptive search result and then diversion of traffic may be classified as a bait and switch (ASCI Guidelines, 2023) type of dark pattern where the user performs one action, but gets a different or undesired result (Saville & Rocha, 2023). Such practices are harmful to consumers and are prohibited by both advertising and consumer laws in India (The Consumer Protection Act, 2019).

In ***XYZ v. Alphabet Inc. & Ors. Case No. 07 of 2020,*** **(Google Pay case)**, the CCI found that Google, through its design, offered better integration for its own Unified Payments Interface (*UPI*) app (Google Pay) as compared to other UPI apps for processing payments on the Google Play Store (*XYZ v. Alphabet Inc. & Ors.* Case No. 07 of 2020). The CCI specifically found that Google Pay was better integrated into the system than other UPI apps allowing for a more user-friendly experience for those using Google Pay, which led to a greater number of users using the Google Pay app for payment. The CCI held that Google, through its discriminatory practice against other UPI platforms had abused its dominant position (*XYZ v. Alphabet Inc. & Ors.* Case No. 07 of 2020). On appeal, the NCLAT, in a mixed verdict, upheld the finding of abuse with respect to imposition of unfair and discriminatory conditions by Google, but set aside the findings of significant negative effect on innovation and denial of market access to other payment processors (*Alphabet Inc. & Ors. v. CCI & Anr.* Competition Appeal (AT) No. 04 of 2023).

In Re: Updated Terms of Service and Privacy Policy for WhatsApp Users **(2021)** the CCI launched a suo motu case against WhatsApp's privacy policy. Here it found a prima facie case of abuse of dominance against WhatsApp, on grounds that WhatsApp is engaging in exploitative abuse that eliminates consumers' choice regarding sharing their user data with WhatsApp's parent company, Facebook, as many of the terms in WhatsApp's privacy policy were "*broad, vague and unintelligible"* (*In Re: Updated Terms of Service and Privacy Policy for WhatsApp Users, Competition Commission of India*, Suo Moto Case No. 01 of 2021, 05 of 2021 & 30 of 2021,

2021). The use of ambiguous terms like 'such as', 'for example' and 'includes' indicated that sharing of data may extend beyond the information categories expressly mentioned in the policy (*In Re: Updated Terms of Service and Privacy Policy for WhatsApp Users, Competition Commission of India*, Suo Moto Case No. 01 of 2021, 05 of 2021 & 30 of 2021, 2021).

A sense of urgency was created in the users, with a fear of losing essential features or access to the platform itself (*In Re: Updated Terms of Service and Privacy Policy for WhatsApp Users, Competition Commission of India*, Suo Moto Case No. 01 of 2021, 05 of 2021 & 30 of 2021, 2021). Many accepted the update under pressure and confusion caused by WhatsApp, forcing them to accept the policy out of **coercion** and not free choice (*In Re: Updated Terms of Service and Privacy Policy for WhatsApp Users, Competition Commission of India*, Suo Moto Case No. 01 of 2021, 05 of 2021 & 30 of 2021, 2021). The behavioral biases limited the ability of consumers to meaningfully engage with the policy updates, forcing them to agree with something that they don't agree with. This violated Section 4(2)(a)(i) of the Competition Act, 2002 (*In Re: Updated Terms of Service and Privacy Policy for WhatsApp Users, Competition Commission of India*, Suo Moto Case No. 01 of 2021, 05 of 2021 & 30 of 2021, 2021). In November 2024, the CCI passed its order and imposed a fine of ₹213.14 crore on Meta, WhatsApp's parent company for imposing unfair terms on users and abusing its dominant position in the messaging market (*In Re: Updated Terms of Service and Privacy Policy for WhatsApp Users*, Competition Commission of India, Suo Moto Case No. 01 of 2021, 2021).

Following the CCI's order, the NCLAT on appeal by Meta, expressly engaged with the concept of dark patterns in its decision (*WhatsApp LLC v. CCI & Ors.*, Competition Appeal (AT) No 1 of 2025). It examined how the framing of the choice, "agree or be cut off from your social network", and the use of "choice architecture" or design tricks could coerce users into actions they would not otherwise take (*WhatsApp LLC v. CCI & Ors.*, Competition Appeal (AT) No 1 of 2025). The Tribunal also discussed the role of status quo bias in influencing user behaviour (*WhatsApp LLC v. CCI & Ors.*, Competition Appeal (AT) No 1 of 2025). Further, it observed that the mandatory, "take-it-or-leave-it" nature of the policy could be construed as creating a manufactured sense of urgency between January and May 2021, pressuring users to accept the terms out of fear of losing access to the service (*WhatsApp LLC v. CCI & Ors., Competition Appeal* (AT) No 1 of 2025). Significantly, even after clarifications were issued that accounts would not be deleted, users continued to receive repeated in-app prompts to accept the policy (*WhatsApp LLC*

v. CCI & Ors., Competition Appeal (AT) No 1 of 2025). The Tribunal also flagged the use of deceptive language. Ultimately, the NCLAT upheld the findings of abuse and the penalty of ₹213.14 crore, while setting aside the five-year prohibition on data sharing between WhatsApp and Meta companies (*WhatsApp LLC v. CCI & Ors*., Competition Appeal (AT) No 1 of 2025).

The SC, while examining WhatsApp's updated privacy policy, made pointed observations cautioning against the exploitation of Indians' personal data, underscoring the independent economic value of data itself. The Court emphasized that mere formal consent cannot be equated with informed or meaningful consent, particularly in a country marked by uneven levels of digital literacy. These observations are especially salient in the context of dark patterns. Where interface design, repeated prompts, or coercive framing are used to secure acceptance, the resulting "consent" is often a product of manipulation rather than genuine autonomy. The Court's recognition that data possesses intrinsic economic value further aggravates this concern.

6. Conclusion

Though dark patterns are a competition law concern, there is no competition law provision in India, prohibiting their usage. This raises several difficulties.

First is the problem of identification by the regulator. It can be hard to understand that a tricky design interface is a dark pattern (Porto & Egberts, 2023) unless the law states so. Dark patterns have not been explicitly defined or recognized by competition laws in India. However, consumer, advertising, banking and insurance laws and regulations in India, have defined dark patterns.

Secondly, dark patterns of various forms are being regulated in digitals markets. India does not have any digital competition law. Competition authorities, in examining these practices mostly rely on the principles of coercion, competitive foreclosure and consumer harm. Proving either of these elements is not easy. Cases reveal that the courts have not articulated a consistent standard for determining coercion (Lampecco, 2021). It has also been argued that the coercion theory will work in the first place, if no substitutes are present (Lampecco, 2021). If there are substitutes available and customers buy a product which makes them worse off, by taking a biased decision, would it be correct to classify this practice as coercion? Going by competition law jurisprudence, there are no clear answers to this.

Thirdly, cases suggest that it is very difficult to demonstrate that dark patterns have in fact resulted in competitive foreclosure and consumer harm. This was illustrated in the Google Pay case, where the CCI was criticized for punishing Google, in absence of sufficient evidence to demonstrate that

the status quo bias created by its default payment app Google Pay, had impacted consumers. The NCLAT later overturned the CCI's views that Google blocked market access or hindered innovation. Therefore, unless we operate on a presumption of harm, and shift the burden to the defendant, it will be very arduous to prove that deceptive patterns have caused the harm (Economides & Lianos, 2011). This task of gathering enough evidence by way of market studies and otherwise, will be even more burdensome in newer competition regimes like India, where the regulator is already facing constraints of resources.

Further, this challenge is compounded by the Supreme Court's recent ruling in *Schott Glass* (2025) which clarified that an assessment of *effects* is mandatory in abuse of dominance cases (*Competition Commission of India v. Schott Glass* 2025 INSC 668). Therefore, by insisting on proof of actual or likely adverse effects on competition, the Court raised the evidentiary threshold for intervention. While this may, in general, be viewed as acceptable, in the specific context of dark patterns, where harm is often behavioral and cumulative rather than immediately observable, this effects-based requirement makes successful enforcement even more difficult, without certain presumptions or recalibrated standards of proof. The EU's trajectory offers certain valuable takeaways. In the pre-DMA era, the cases on Google Shopping and Google Android assessed impugned conduct through an effects-based lens, yet recognized that certain practices, such as self-preferencing, displayed a "certain form of abnormality" or inherent discriminatory character within the meaning of Article 102 TFEU. Post-2024, the DMA marked a decisive turn, wherein for designated gatekeepers, it operates largely on a quasi "by object" logic, meaning that practices such as self-preferencing (Article 6(5)), tying/bundling, and cross-use of data are treated as *presumptively* unlawful, doing away with the need for the Commission to establish anticompetitive effects in each individual case (Sainio, 2023).

In view of the factors highlighted above, the authors put forward the following suggestions.

Firstly, digital competition law, which is being debated in India, should clearly address dark patterns. Defining dark patterns in competition law, or adopting their definitions/classifications from other laws, will lead to harmonious interpretation and prohibition of such practices by Indian regulators. Regulators globally are weighing a hard law versus a soft law approach on such emergent issues to balance compliance and incentives (Thakkar, 2019).

Secondly, the advantage of competition law calling out dark patterns directly is that specific obligations can be imposed on dominant digital firms not to indulge in such practices. This will be

particularly useful for newer competition regimes like India, which has resource constraints but a rapidly developing digital market. It would be useful to think about how the *Google* and *WhatsApp* case would have played out in India, if dark patterns had already been explicitly recognized by competition law.

Thirdly, the decision in *Schott Glass* (2025), which mandates an effects-based assessment, may be ill-suited to digital markets, particularly in the context of practices such as dark patterns (*Competition Commission of India v. Schott Glass* 2025 INSC 668). Economic analysis and a nuanced approach in judicial decisions is necessary to achieve legal efficiency (Sikri, 2024). In digital markets waiting for demonstrable effects may result in irreversible consumer harm and market tipping. This suggests the need for more specific or separate regulatory frameworks for digital markets that permit ex-ante intervention against dark patterns, without requiring regulators to await the full materialization of harm. Authors suggest incorporation of dedicated behavioral economics audits in legal and policy interventions, to promote effective competition in digital markets. (Ministry of Finance, 2019; Badhani, 2024).

In the opinion of the authors, careful consideration of the suggestions above would help in antitrust regulation of dark patterns. The CCI Chairperson has vocalized AI and dark patterns to be an emerging threat to competition and a burning issue for the Competition Commission (BRICS Competition Law & Policy Centre, 2024; Sharma, 2024). This is a regulatory gap in the digital competition law framework in India and needs urgent attention.

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