Behavioral Economics and Generative Artificial Intelligence in European Competition Law: Challenging Economic Models of Consumer Behavior

Abstract

The integration of generative artificial intelligence into digital platforms presents unprecedented challenges to traditional competition law frameworks, particularly the economic models of consumer behavior that underpin market definition and consumer welfare analysis. The Google AI Overview case, filed with the European Commission in June 2025, serves as a critical juncture for examining how behavioral economics can reshape our understanding of market competition in the artificial intelligence era.

Therefore, this research develops a comprehensive behavioral economics analysis of the antitrust implications of AI-driven search systems, demonstrating how generative AI exploits cognitive biases in ways that traditional economic assumptions about consumer substitution and market dynamics struggle to address. Through an interdisciplinary approach combining legal doctrinal analysis with empirical behavioral research, this study argues that the economic models of consumer behavior embedded in EU competition law frameworks – especially in market definition exercises and consumer welfare assessments – render existing approaches inadequate for addressing the sophisticated behavioral manipulation enabled by AI systems. The research proposes novel regulatory approaches that explicitly account for cognitive biases and choice architecture manipulation in AI-mediated environments while maintaining legal certainty and practical enforceability.

1. Introduction and Research Context

The integration of generative Artificial Intelligence (AI) into digital platforms poses profound and unprecedented challenges to the theoretical, doctrinal, and practical foundations of European competition law. The history of the enforcement of this latter discipline has been dominated by reliance on models that assume consumer rationality, predictability of substitution behavior, and the capacity of individuals to evaluate their own welfare in the marketplace. These assumptions, long criticized by behavioral economists, are being put under renewed scrutiny in light of technological contexts where decision-making is deliberately shaped by cognitive biases and subtle manipulations. The *Google AI Overview* case, filed in June 2025 before the European Commission, represents a paradigmatic moment, because it does not simply revolve around familiar themes of traffic diversion or publisher revenue losses but rather, it illuminates a much deeper challenge: the systematic exploitation of human cognitive limitations by AI-driven interface design.

Competition law has long relied on analytical instruments premised on rational behavior. The SSNIP test, for example, presumes that consumers respond predictably to price increases by switching to substitutes. Similarly, the consumer welfare standard presupposes that individuals, although imperfect, are capable of assessing their preferences and making informed decisions. Against these traditional assumptions, behavioral economics studies have shown that the concept of perfect human rationality is just unrealistic. On the contrary, behavioral economists have demonstrated that people rely on heuristics, are influenced by framing effects, and tend to stick with defaults even when better options are available. This development calls into question whether competition law frameworks - that were sufficient for the industrial and early digital economies - can adequately address harms arising from psychological influence and behavioral manipulation. The Google's AI generative tool demonstrates how dominance may be consolidated not by traditional economic coercion, such as

predatory pricing or exclusive dealing, but through the careful design of digital environments that subtly reduce the autonomy of users. This section sets the stage by situating the case within the larger debates over the intersection of behavioral economics and competition law, arguing that existing approaches to market definition and consumer welfare are no longer sufficient.

In this particular context, digital platforms or search engines' interfaces are specifically designed to exploit different kind of biases. Among them, we can recall for the moment the so-called "availability heuristic" that is engaged when platforms place AI-generated summaries prominently at the top of search results which ensure that users recall and trust this content most easily; the "choice architecture" bias is instead involved when the path of least resistance favors AI-generated answers over original sources, creating a situation where technical choice exists but practical incentives push in one direction; and, finally, the "status quo" bias and the "cognitive inertia" ensure that once users adapt to receiving immediate AI-generated responses, they are unlikely to revert to more effortful search practices. This combination of biases produces substitution patterns that appear rational only on the surface but, in reality, they reflect the careful manipulation of psychological tendencies.

This phenomenon raises profound questions for competition law, because traditional market boundaries and consumer welfare metrics may misidentify competitive harm and markets defined in terms of rational substitution miss the fact that the AI system effectively removes consumers from competition by creating dependency.

Therefore, this paper will elaborate the theoretical foundations of these issues, drawing on the works of behavioral economists such as Simon, Kahneman, Tversky, and Thaler, and situates them in relation to EU law.

2. Research Questions

All this considering, the main issue of this research lies in the inadequacy of existing competition law doctrines to confront markets shaped by generative AI systems that influence decision-making at a psychological level. The *Google AI Overview* case illustrates this issue clearly, as it raises the question of whether the service constitutes a mere enhancement of conventional search, the creation of a new AI-mediated market, or the leveraging of established dominance in search into adjacent content-generation and distribution sectors. The classification of AI Overview has direct regulatory consequences because, if treated as a new market, regulators must assess entry barriers, substitutability, and the likelihood of dominance; on the contrary, if treated as a feature of existing search markets, then abuse of dominance becomes the primary concern. Yet, in either case, the critical issue is that user substitution patterns may not reflect rational evaluations of quality or utility, but rather the result of behavioral manipulation. In particular, publishers have reported severe losses, with some facing traffic declines of up to 90%, and aggregate studies confirm that 70% percent of AI Overview queries result in no clicks to original sources. These statistics cannot be explained through traditional models of consumer welfare, which presume that individuals act in their best interest when presented with options and, accordingly, the empirical evidence suggests otherwise.

In this context, three guiding research questions emerge and need to be addressed.

First, this paper will try to understand if generative AI tools create new biases (and, if so, mapping them) and how they influence consumers behavior online.

Second, this research will analyse the consumer welfare standard under Article 102 TFEU to comprehend if it's still adequate in the generative AI context, where consumers act under bounded rationality and cognitive bias.

Finally, we will assess the current regulatory frameworks, including the DMA, to study the tools offered by the European legislator in this discipline and understand if they are still effective in addressing manipulation-based harms, or if there is a need for a reconsideration of some traditional antitrust concepts. This final assessment will be conducted with a behavioral law & economics perspective to propose further legislative tools more effective to face the challenges posed by generative AI.

3. Conceptual Framework: Behavioral Economics and Competition Law

Competition law has long relied on analytical instruments premised on rational behavior. The SSNIP test, for example, presumes that consumers respond predictably to price increases by switching to substitutes. Similarly, the consumer welfare standard presupposes that individuals, although imperfect, are capable of assessing their preferences and making informed decisions. Behavioral economics, however, has shown for decades that such assumptions are unrealistic. People rely on heuristics, are influenced by framing effects, and tend to stick with defaults even when better options are available. In the AI Overview context, these insights are not merely theoretical observations but operational realities. Google's interface is designed to exploit the availability heuristic by placing AI-generated summaries prominently at the top of search results, thereby ensuring that users recall and trust this content most easily. The choice architecture bias is engaged when the path of least resistance favors AI-generated answers over original sources, creating a situation where technical choice exists but practical incentives push in one direction. Finally, the status quo bias and cognitive inertia ensure that once users adapt to receiving immediate AI-generated responses, they are unlikely to revert to more effortful search practices. This combination of biases produces substitution patterns that appear rational only on the surface. In reality, they reflect the careful manipulation of psychological tendencies. This raises profound questions for competition law, because traditional market boundaries and consumer welfare metrics may misidentify competitive harm. Markets defined in terms of rational substitution miss the fact that the AI system effectively removes consumers from competition by creating dependency. This section elaborates the theoretical foundations of these issues, drawing on the works of Simon, Kahneman, Tversky, and Thaler, and situates them in relation to EU law.

4. Methodology

The methodology adopted for this research is interdisciplinary by design. Traditional legal analysis provides the backbone, focusing on Article 102 TFEU jurisprudence, the European Commission's practice in cases such as *Google Shopping* and *Android*, and on the legislation of digital platforms and AI systems.

Alongside this doctrinal inquiry, we will study and analyse the behavioral economics' studies and results to understand how AI-mediated environments exploit cognitive biases.

5. Findings and Contributions

The research yields a set of findings that can be grouped into theoretical, empirical, and policy contributions.

Theoretically, the study demonstrates that market power in AI-mediated contexts is exercised through psychological influence rather than traditional economic means. The identification of specific cognitive biases, and the demonstration of how they are systematically exploited, provides a framework for competition authorities to recognize harms not visible under conventional analysis.

Empirically, the research documents significant changes in online traffic patterns, with users' behavior shifting toward reliance on AI-generated summaries. This evidence corroborates the hypothesis that generative AI, such as AI Overview, operates as a behavioral manipulation device rather than a neutral information service.

In policy terms, the study proposes a novel regulatory toolkit including transparency requirements regarding behavioral design, mandatory disclosure of how AI systems influence choices, and independent algorithmic audits. These tools move beyond economic metrics to capture the reality of cognitive influence. The findings underline the necessity of interdisciplinary analysis in competition law, and they show how incorporating behavioral insights can enhance the effectiveness of legal frameworks.

The implications of these findings for competition law and policy are profound. Remedies traditionally employed, such as fines or structural divestitures, are poorly suited to address harms arising from cognitive manipulation. Instead, forward-looking, behaviorally informed tools are needed.

6. Conclusion and Future Research

The *Google AI Overview* case is emblematic of the challenges posed by generative AI for competition law. It highlights how market power can be exercised not through traditional economic mechanisms but through manipulation of cognitive processes. This realization necessitates a paradigm shift in legal thinking since competition law must evolve to integrate behavioral insights, re-examining market definition, consumer welfare, and the adequacy of remedies. The research contributes theoretical clarity, empirical evidence, and practical recommendations, demonstrating that interdisciplinary approaches are essential. Future research should deepen empirical understanding of user behavior, expand cross-jurisdictional analyses of regulatory responses, and explore the interactions between competition law, data protection, and copyright in AI contexts. Only through sustained interdisciplinary and international collaboration can regulatory frameworks remain effective in a rapidly evolving technological landscape.

This work lays the foundation for such efforts by showing that behavioral economics and competition law must be understood not as separate domains, but as mutually reinforcing perspectives essential to governing digital markets in the age of AI.