

# Antitrust Jurisprudence of Consumer Choice in Digital Platform Markets: A Comprehensive Review of Literature

Anshuman Sahoo\*, Arindam Basu

Rajiv Gandhi School of Intellectual Property Law, IIT Kharagpur, West Bengal, INDIA.

## ABSTRACT

This paper provides a comprehensive review of the literature on consumer choice within the domain of antitrust jurisprudence, particularly in digital platform markets. Leveraging bibliometric tools such as citation network analysis and co-citation analysis, the study systematically maps the academic discourse, identifying key research trends, influential works, and emerging themes. The primary focus of the article is to explore the evolving concept of consumer choice, which is critical for understanding market dynamics and regulatory interventions in digital economies dominated by platform giants, through the help of scientometric tools and techniques. In addition to the findings underscoring a nuanced understanding of the jurisprudential aspect of consumer choice, the study also highlights the importance of employing scientometric techniques to study the complex and rapidly evolving landscape of digital platform markets through the lens of extant research literature.

**Keywords:** Consumer Choice, Freedom of Choice, Competition, Antitrust, Digital Platforms.

## Correspondence:

**Anshuman Sahoo**

Rajiv Gandhi School of Intellectual Property Law, IIT Kharagpur, West Bengal-721302, INDIA.  
Email: anshuman@thelawblog.in

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## INTRODUCTION

The advent of digital platform markets has revolutionized the way consumers interact with goods and services, creating both opportunities and challenges for competition law.<sup>[1]</sup> However, the increasing dominance of digital giants such as Google, Amazon, Facebook, and Apple raise critical questions about the freedom<sup>[2]</sup> of consumer choice in these environments. Given its significance in market-centric, welfare-centric, and right-centric views of law and regulation, consumer choice is a cornerstone in market regulatory approaches, which has been recognized by authorities across the globe.<sup>[3]</sup>

The significance of consumer choice in antitrust jurisprudence is further heightened in digital platform markets, given its dynamism and the networked nature. Datafication, the process of collecting and analyzing consumer data, profoundly impacts consumer choice. Data-driven insights enable platforms to personalize experiences, enhancing relevance but potentially limiting exposure to diverse options and creating echo chambers.<sup>[4]</sup> Datafication empowers consumers with information but raises concerns about the credibility of user reviews, ratings, and comparisons.<sup>[5]</sup> Predictive models based on aggregated data anticipate preferences, reducing cognitive effort but limiting

exposure to novel choices. Datafication amplifies network effects, enhancing service quality but raising barriers for new entrants, potentially limiting consumer choice. Targeted advertising based on data-driven insights can manipulate preferences, limiting exposure to alternative viewpoints.

Against this background, systematically studying consumer choice in digital platform markets through an antitrust lens is increasingly important. Central to this exploration is a rigorous scientometric analysis of the literature on consumer choice and competition law. Scientometrics, as a field, provides powerful tools for mapping and analyzing the structure of academic research through quantitative methods. By employing bibliometric tools such as citation network analysis, co-citation analysis, and cluster identification, this paper offers a structured and data-driven understanding of the current scholarly landscape. These methods facilitate the identification of key research trends, influential works, and emerging themes within the field, providing a comprehensive overview of how the discourse on consumer choice in digital platform markets has evolved over time.

The scientometric approach adopted in this paper begins with a bibliometric analysis using the Web of Science Core Collection to extract relevant literature on "Consumer Choice" and "Competition Law." This analysis yields a robust dataset, which is then subjected to citation network analysis to uncover the relationships between various studies and identify major research clusters. By analyzing co-citation patterns, the paper highlights the most influential articles and authors, offering insights into the intellectual structure of the field. Additionally, cluster



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identification helps in pinpointing specific areas of focus within the literature, revealing how different themes such as consumer sovereignty, data privacy, and market power have developed and intersected over time.

Through this comprehensive scientometric review and analysis, the paper aims to highlight the dual utility of consumer autonomy as both a cornerstone of a free digital society and a mechanism for enhancing market efficiency. By examining the intersection of consumer choice and antitrust jurisprudence through a scientometric lens, the paper seeks to contribute to the ongoing discourse on how competition policy can address the autonomy polycrisis in the platform economy. The insights gained from this analysis are expected to provide a nuanced understanding of the challenges and opportunities presented by digital platform markets, informing both academic research and policy-making in competition law.

Concluding, this paper underscores the importance of employing scientometric techniques to navigate the complex and rapidly evolving landscape of digital platform markets. By leveraging these tools, researchers and policymakers can gain a deeper understanding of the dynamics at play, ensuring that competition law evolves in step with technological advancements to protect consumer autonomy and promote fair and competitive markets.

## Problem Statement

The field of legal scholarship has long grappled with the challenge of conducting comprehensive and objective literature reviews. Traditional approaches to literature analysis have often been criticized for their arbitrary methodologies, which can lead to biased or incomplete assessments of the existing body of knowledge. This shortcoming is particularly concerning given the intricate and multifaceted nature of legal issues, which renders them susceptible to the influence of researchers' inherent biases and predispositions. By adopting a structured and data-driven approach, researchers can potentially mitigate the deleterious effects of researcher bias, which can manifest in various forms, including selective attention, theoretical predilections, or personal ideological leanings. Its significance lies in ensuring that legal research is thorough, objective, and free from bias, which is critical for advancing legal scholarship and informing policy decisions. Solving this problem could significantly enhance the quality and credibility of legal research, leading to more informed and balanced legal and regulatory decisions. Additionally, it would contribute to a deeper and more nuanced understanding of complex legal issues, benefiting both academic research and practical policy-making in the field of competition law and digital platform markets.

## Bibliometric Analysis

### Methodology

The choice of database for bibliometric analysis was finalised to be Web of Science (WoS) bibliographic database. In selecting WoS for the bibliometric analysis, we were guided by two primary considerations. First, WoS is known for its comprehensive coverage and rigorous selection criteria for journals and publications, particularly in the area of our research. This ensured that our analysis was grounded in a database that is both reputable and relevant to the topic at hand. Second, our approach to the bibliometric analysis was to infer broad patterns and trends rather than focusing on specific details or counts of individual papers. Given this approach, we assessed that WoS would suffice for our needs without compromising the integrity or the depth of our analysis.

We also wish to highlight that in the subsequent literature review sections (sections 3.2 and 3.3) of our paper, we expanded our sources to include multiple databases, including Scopus. This was done to ensure comprehensive coverage of the literature and to address any potential limitations in the scope of the bibliometric analysis. We believe that our methodological approach, while streamlined for practicality, remains robust and fit for the purpose of our study.

Utilizing the Web of Science bibliographic search platform, a comprehensive document search was conducted on the 31st of January, 2023, at precisely 19:05 IST, employing the specific keyword "Consumer Choice." To ensure a focused and efficient extraction of citation records, this search was intentionally confined to the Web of Science Core Collection. This strategic limitation was imposed to circumvent the complexities associated with citation record retrieval that are prevalent when expanding the search to encompass all available databases within the platform. Subsequent to the implementation of these meticulously defined parameters, the search yielded a total of 2,048 documents. These documents were subsequently earmarked for an in-depth analysis aimed at uncovering and mapping the emergent research domains within the field of consumer choice. This methodological approach, inspired by similar studies in other disciplinary boundaries,<sup>[6,7]</sup> underpins our bibliometric analysis, facilitating a structured exploration of the prevailing trends and thematic concentrations that characterize the extant literature.

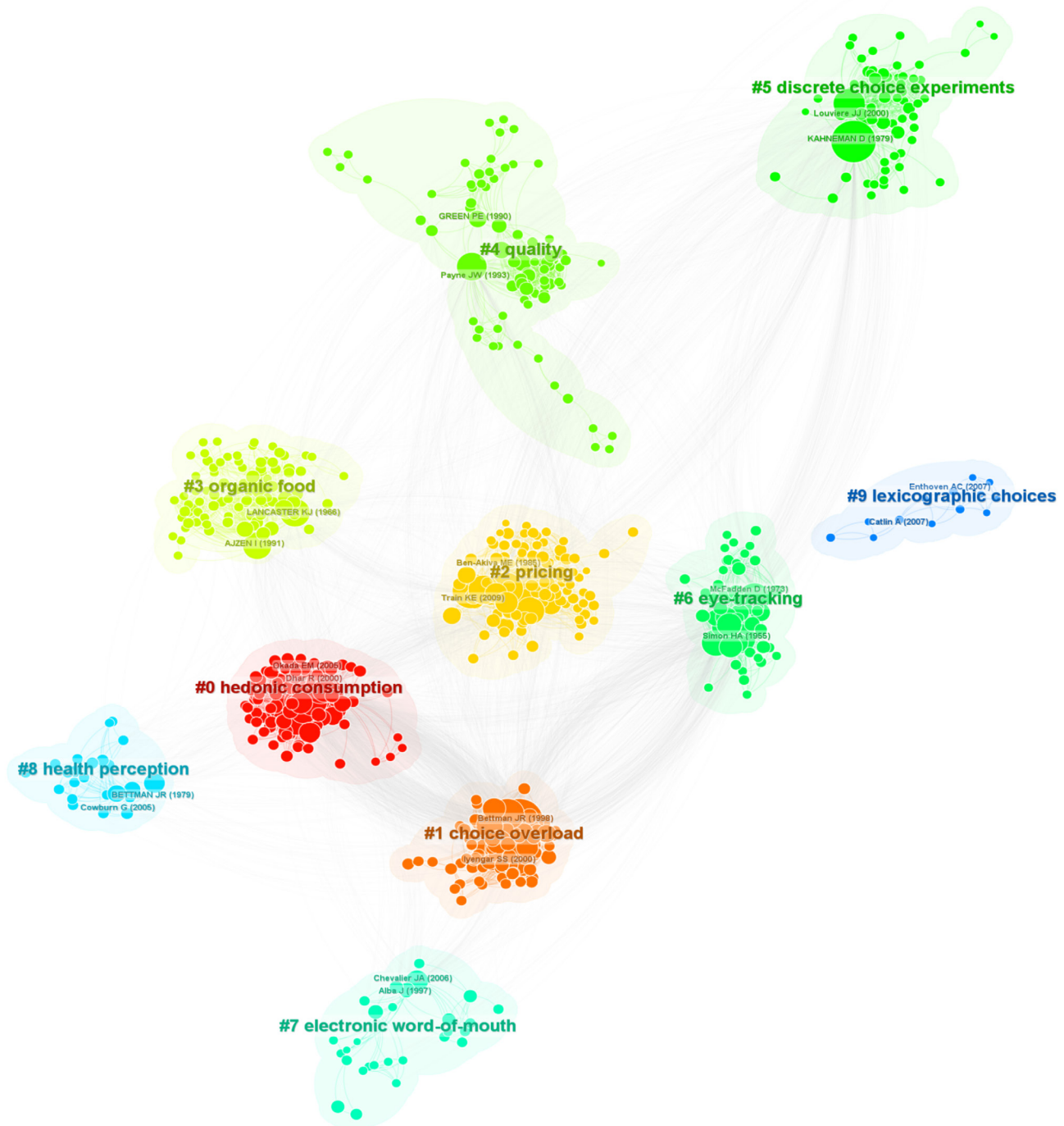
## Analysis of Literature Co-citation Clusters

Citespace was used for analysing the emerging patterns in the literature by employing a document co-citation network analysis.<sup>[8]</sup> Document co-citation network analysis involves mapping relationships between research papers based on shared citations. When two papers are cited together by other works, they share a co-citation link. This network visualizes the intellectual connections within a field, identifying clusters

of related papers and influential documents. Nodes represent papers, and edges signify co-citation relationships. Clusters reveal research themes, and highly co-cited papers indicate influential contributions. The network's evolution reflects emerging trends and changing research landscapes.<sup>[9]</sup> Bridge papers connect clusters, highlighting interdisciplinary connections.

To measure the strength of the links, the researcher has used cosine similarity (cosine of the angle between two vectors) measure. Higher cosine link strength, implying higher degree

of co-occurrence, has been represented by thicker lines. The selection criteria for papers was set to a modified g-index in order to focus the analysis on papers within a cluster that have had a relatively high impact in terms of citations. A scale factor, which determines the size of the nodes, was set to 25 to optimise the visualisation. A time span of 2005 to 2023 has been used. The selection of time span has been informed with the understanding that the notion of consumer started gaining traction only in the latter half of 2000s, particularly after the case of *Microsoft Corp. v Commission of the European Communities* (2007). The Link



**Figure 1:** Citation clusters.

Retaining Factor (LRF) has been set to -1, and maximum Links per Node (L/N) has been restricted to 10. The value of Look Back Years (LBY) has been set to -1.

Each node in the visualization represents a research output with significant contributions to the field being examined under the relevant cluster. Links or edges between nodes represent co-citation relationships, indicating that the connected publications/authors have been cited together in other research papers. Clusters are formed based on dense regions of co-citation. Each cluster is labeled with terms derived from the titles, abstracts, or keywords of its comprising articles, reflecting the dominant theme of that cluster. Hence, each cluster in the visualization represents a group of related papers that share common themes, concepts, or research areas. These clusters are color-coded and labeled with a number and keyword that reflects the primary topic of the cluster.

Based on the bibliometric analysis, a total of forty (40) clusters were found incorporating both articles that serve as citers as well as those that are cited references, out of which the largest 10 clusters were selected for a detailed analysis. Within these clusters (Table 1), nodes-representing individual articles, authors, or keywords-are assessed for their relative importance based on a multidimensional framework of metrics.

1. Citation-Based Metrics: The primary citation-based metrics employed for this analysis are citation counts and citation bursts. Citation counts provide a straightforward measure of a node's influence by quantifying how often it has been cited. On the other hand, citation bursts capture temporal dynamics, identifying periods during which a particular node has gained heightened importance in the academic discourse.

2. Network-Based Metrics: Degree centrality and betweenness centrality are the principal network-based metrics utilized. Degree centrality measures the number of connections a node has within the network, thereby offering insight into its immediate influence. Betweenness centrality gauges a node's role as an intermediary within the network, revealing how often it lies on the shortest path between other nodes. This can highlight nodes that serve as critical links between different clusters or themes.

Notably absent from the current analysis are several advanced analytical approaches involving:

1. Structural Variation Analysis: This would delve into the internal organization of clusters, exploring how they may diverge in terms of thematic or methodological focus.
2. Analysis of Uncertainties: Normally used to identify and quantify the degree of uncertainty associated with specific clusters or trends, this aspect has been excluded from the current report.
3. Concept Trees: These would provide a hierarchical visualization of the relationships among various concepts within the literature, offering an additional layer of thematic understanding.

4. Dual-Map Overlays: These enable a spatial representation of how different topics or disciplines interact with one another but are not covered in the present summary.

These omitted features, while valuable in specific contexts, were deemed non-essential for the scope and objectives of this particular literature review.

### Cluster 0: Hedonistic versus utilitarian consumption

This cluster comprises 127 members and has been statistically validated with a silhouette value of 0.71. It is dominantly categorized under the thematic label "moderating role" by two distinct techniques: LLR (Log-Likelihood Ratio) and LSI (Latent Semantic Indexing). A third technique, MI (Mutual Information),<sup>[10]</sup> identifies it with the topic "fuel demand." The seminal citing article within this cluster is Whitley's 2018 study,<sup>[11]</sup> which focused on purchase motivation and consumer choice. Leading cited articles feature works by Dhar and Wertenbroch,<sup>[12]</sup> Okada,<sup>[13]</sup> and Hirschman and Holbrook,<sup>[14]</sup> exploring various facets of marketing research relating to consumer choice between hedonic consumption and utilitarian consumption.

### Cluster 1: Choice Overload

With 124 members, this cluster obtains a silhouette value of 0.735. It explores "choice overload" and is considered pivotal in literature about consumer psychology. The primary citing article is by Botti in 2022,<sup>[15]</sup> which looks at the nuances of choice freedom. Leading cited articles include works by Bettman *et al.*,<sup>[16]</sup> Iyengar *et al.*,<sup>[17]</sup> and Simonson,<sup>[18]</sup> addressing issues related to consumer choice and psychological aspects.

### Cluster 2: Dynamic Pricing

Comprising 118 members, this cluster has an impressive silhouette value of 0.838. It mainly discusses "dynamic pricing," a critical area in marketing and operations management. The seminal citing article is Li and Huh's 2011 study,<sup>[19]</sup> which addresses pricing models. Leading cited works include contributions from Train,<sup>[20]</sup> Ben-Akiva & Lerman,<sup>[21]</sup> and McFadden & Train,<sup>[22]</sup> each illuminating different aspects of discrete choice and econometric models.

### Cluster 3: Consumer Preference in food purchase

This cluster has 98 members and stands out with a silhouette value of 0.858. The topics revolve around "consumer preference" and "consumer choice." The primary citing article is by Rodriguez-entrena *et al.* in 2013,<sup>[23]</sup> focusing on food purchase intentions. Leading cited works feature Lancaster,<sup>[24]</sup> Ajzen,<sup>[25]</sup> and Aertsens *et al.*,<sup>[26]</sup> who delve into behavioral and economic aspects of consumer choices.



#### Cluster 4: Consumer choice in Health Care

Consisting of 80 members, this cluster is remarkable for its high silhouette value of 0.905. It mostly discusses healthcare themes, prominently featuring articles on consumer choice in healthcare services. Kolstad's 2009 article<sup>[27]</sup> is the seminal citing work, addressing quality and consumer decision-making in healthcare. Leading cited articles include Payne *et al.*,<sup>[28]</sup> Green & Srinivasan,<sup>[29]</sup> and Jin & Sorenson,<sup>[30]</sup> focusing on decision-making in the healthcare sector.

#### Cluster 5: Car Purchase

With 67 members and a silhouette value of 0.849, this cluster is primarily related to "car purchase." The seminal citing article is by Sælensminde in 2006,<sup>[31]</sup> exploring lexicographic choices in stated choice studies. Leading cited works include Kahneman & Tversky,<sup>[32]</sup> Louviere *et al.*,<sup>[33]</sup> and Swait & Adamowicz,<sup>[34]</sup> each offering unique perspectives on consumer choice theories.

#### Cluster 6: Modeling Eye Movement

This cluster includes 60 members and has a high silhouette value of 0.875. It centers around the study of eye movement in decision-making. Wedel *et al.*'s 2020 review article<sup>[35]</sup> serves as the seminal citing work. Cited articles of note feature works by Simon<sup>[36]</sup> and McFadden & Train,<sup>[22]</sup> both of whom have made seminal contributions to economics and psychology.

#### Cluster 7: Visual Exploration

This cluster comprises 29 members and achieves a silhouette value of 0.912. It discusses "visual exploration," particularly in the context of consumer behavior in supermarkets. The seminal citing article is by Sippel *et al.* in 2014,<sup>[37]</sup> which examines the impact of visual field loss. Leading cited articles include works by Chevalier & Mayzlin<sup>[38]</sup> and Alba *et al.*,<sup>[39]</sup> focusing on consumer behavior in retail settings.

#### Cluster 8: Menu Label Design

With 25 members, this cluster receives a silhouette value of 0.934. The primary focus is on menu label design and its impact on consumer choice. Reale's 2016 article<sup>[40]</sup> serves as the seminal citing work, exploring the psychology of visual attention in menu selection. Leading cited articles include works by Bettman *et al.*<sup>[41]</sup> and Cowburn & Stockley,<sup>[42]</sup> discussing marketing and public health nutrition, respectively.

#### Cluster 9: Individual Mandate

This cluster is the smallest with 13 members but has an almost perfect silhouette value of 0.998. It focuses on policy-related themes, specifically the "individual mandate" in healthcare. Rosenau & Lako's 2008 article<sup>[43]</sup> serves as the seminal citing work, examining regulated competition in the Dutch health insurance system. Leading cited works include contributions from Catlin *et*

**Table 1: Summary of the largest 10 clusters.**

ClusterID	Size	Silhouette	Label (LSI)	Label (LLR)	Label (MI)	Average Year
0	127	0.71	Moderating role	Moderating role	Fuel demand	1993
1	124	0.735	Choice overload	Choice overload	Music recognition	2000
2	118	0.838	Dynamic pricing	Dynamic pricing	Vertical rebate	2000
3	98	0.858	Consumer choice	Consumer preference	Process characteristics	2002
4	80	0.905	Consumer choice	Health care	Evidence from maternal care	1999
5	67	0.849	Consumer choice	Car purchase	Decision outcome	1996
6	60	0.875	Modeling eye movement	Modeling eye movement	Fuel demand	2003
7	29	0.912	Supermarket study	Visual exploration	Mining consumer review	2004
8	25	0.934	Menu label design	Menu label design	Product characteristics	2010
9	13	0.998	An experiment with regulated competition and individual mandates for universal health care: the new dutch health insurance system.	Individual mandate	Consumer choice	2005

*al.*,<sup>[44]</sup> Enthoven & van de Ven,<sup>[45]</sup> and Cutler *et al.*,<sup>[46]</sup> who explore various policy and economic aspects of healthcare systems.

### Analysis of Citation Counts

Citation counts serve as a metric for the influence of academic works within specific research clusters. High citation numbers often indicate that a paper has made a significant impact, offering valuable insights or methodologies that have been widely adopted or challenged by peers, although there are a few studies challenging this blanket assumption.<sup>[47]</sup> Nevertheless, these highly cited works can shape the research agenda, validate certain approaches, and highlight enduring relevance or cross-disciplinary impact.

Out of the ten most cited papers (Table 2), three belong to the 0<sup>th</sup> and 1<sup>st</sup> cluster each, signifying the significance of these concepts in the notion of consumer choice. Of the remaining four articles, two belong to the 2<sup>nd</sup> cluster, showing its significance in the larger picture. The 5<sup>th</sup> and 6<sup>th</sup> cluster each have only one article in the top cited papers group. However, as can be seen from Figure 1, the 5<sup>th</sup> and the 6<sup>th</sup> clusters each are central to the notion of consumer choice as depicted by the heavy connections they share with the central clusters of 0 and 1. While the 6<sup>th</sup> cluster is

directly connected to the clusters 0 and 1, the 5<sup>th</sup> cluster shows its significance by its connection to 0<sup>th</sup> and 1<sup>st</sup> clusters through the 6<sup>th</sup> cluster. In summary, these top-cited papers are likely to be seminal works in their respective areas and have significantly influenced the field of consumer behavior or decision science.

### Burst Detection and Analysis

"Bursts" refers to a sudden increase in citation rates over a specific time frame, suggesting a surge in the paper's relevance or applicability. For instance, JH Bolin<sup>[48]</sup> in Cluster 0 leads with a burst rate of 12.94 (Table 3), indicating a very high and sudden interest in this work. This could mean that the paper has introduced an innovative idea, methodology, or finding that has rapidly gained traction.

Thaler and Hayes, both in Cluster 1, follow with bursts of 9.57 and 8.40, respectively, showing significant but somewhat lesser impact compared to the top-ranked item. Train appears prominently in the list in Cluster 2, suggesting its persistent influence. Ben-Akiva also in Cluster 2, along with others like Shafir and Tversky in Cluster 1, demonstrate bursts over 5, which still signifies substantial attention but to a lesser degree than the

**Table 2: Top cited papers.**

Citation Counts	Literature	DOI	Cluster ID
108	R Dhar & K Wertenbroch <sup>[12]</sup>	10.1509/jmkr.37.1.60.18718	0
96	JR Bettman <i>et al.</i> <sup>[16]</sup>	10.1086/209535	1
88	D Kahneman & A Tversky <sup>[32]</sup>	10.2307/1914185	5
88	EM Okada <sup>[13]</sup>	10.1509/jmkr.42.1.43.56889	0
57	KE Train <sup>[20]</sup>	10.1017/CBO9780511805271	2
50	SS Iyengar & MR Lepper <sup>[17]</sup>	10.1037/0022-3514.79.6.995	1
48	ME Ben-Akiva & SR Lerman <sup>[21]</sup>		2
45	I Simonson <sup>[18]</sup>	10.1086/209205	1
44	EC Hirschman & MB Holbrook <sup>[14]</sup>	10.2307/1251707	0
43	HA Simon <sup>[36]</sup>	10.2307/1884852	6

**Table 3: Burst Detection.**

Bursts	Literature	DOI	Cluster ID
12.94	JH Bolin <sup>[48]</sup>	10.1111/jedm.12050	0
9.57	R Thaler <sup>[49]</sup>	10.1016/0167-2681(80)90051-7	1
8.40	AF Hayes <sup>[50]</sup>		1
6.79	KE Train <sup>[20]</sup>	10.1017/CBO9780511805271	2
6.67	ME Ben-Akiva & SR Lerman <sup>[21]</sup>		2
5.94	E Shafir <i>et al.</i> <sup>[51]</sup>	10.1016/0010-0277(93)90034-S	1
5.92	A Tversky <sup>[32]</sup>	10.2307/2937956	1
5.80	J Swait & Adamowicz <sup>[34]</sup>	10.1086/321952	5
5.50	A Sela <i>et al.</i> <sup>[52]</sup>	10.1086/593692	1

top three. The clustering of these works also offers an interesting dimension- papers within the same cluster having high bursts imply a collective momentum in that specific area of research.

### Centrality analysis

In the realm of network analysis, "centrality" measures the importance of a node (in this case, a research paper) within a network. A higher centrality score indicates a more "central" position in the network, usually meaning that the work is both widely cited and cites many other works, serving as a hub of intellectual exchange.

Kahneman's 1979 paper stands out with the highest centrality of 0.19 (Table 4) in Cluster 5, reinforcing its role as a linchpin in its academic cluster and potentially in interdisciplinary research. The work is not just frequently cited or citing; it likely connects different sub-areas of research within or across clusters. Bettman JR's 1998 paper in Cluster 1 has a centrality of 0.14, also signifying a high level of influence but in a different or more specialized academic circle. This suggests it's another keystone piece in its subject area. Payne *et al.*'s 1993 book in Cluster 4 follows closely with a centrality of 0.12. The fact that it has a high centrality but is located in a different cluster from the first two papers could imply that its importance lies in a different, but still significant, area of academic research.

The rest of the papers also have noteworthy centrality figures. For instance, Ben-Akiva's 1985 paper and Train's 2009 paper both in Cluster 2, Ajzen's 1991 paper and Lancaster's 1966 paper both in Cluster 3, all suggest that these clusters are active areas of research. Their centrality scores range from 0.09 to 0.08, indicating that they serve as important connecting nodes within their clusters. Dhar & Wertenbroch's 2000 paper, Simon's 1955 paper, and McFadden's 1973 paper each have a centrality of 0.07 but are spread across Clusters 0, 6, and 6 respectively. This suggests that while they are influential, their reach may be a bit more limited than the works with higher centrality.

Insights from the bibliometric analysis were used to conduct a thorough forward and backward search of prior literature. The keywords obtained from the bibliometric search were used to build a comprehensive working bibliography prior to the formal keyword search and literature shortlisting process. Although Citespace affords the capacity to engage in myriad other analyses,<sup>[53]</sup> we elected not to pursue these analytical avenues informed by their perceived incongruence with the prevailing scholarly discourse pertinent to this review.

## LITERATURE REVIEW

### Methodology

To avoid arbitrariness and biasness in selection and shortlisting of literature, a detailed literature selection methodology was finalised before the beginning of the literature search process.

Reasonable care was taken to make each decision as scientific and objective as possible, so as to enhance the replicability as well as credibility of the process being undertaken.

### Deciding the literature search database/engines

The internet is home to a number of Academic Search Engines and Bibliographic Databases (ASEBDs), and it has become a common academic practice nowadays to use ASEBDs to seek up-to-date research literature in a given discipline.<sup>[54]</sup> Far from being the mere digitized versions of existing databases, ASEBDs like Google Scholar are crawler-based search engines<sup>[55]</sup> which enable indexing of huge volumes of research papers at no extra cost. However, while there are a number of choices available to the researcher for conducting a literature search, it is difficult to decide which one best serves the purpose because of the lack of data on comparative performance metrics of the ASEBDs.<sup>[56]</sup> Taking the case of Google Scholar, for example, a number of scholars have attempted to assess and estimate the size of Google Scholar<sup>[57]</sup> with Orduna-Malea *et al.* (2015) estimating it at 176 million documents while acknowledging that methods assessing its size are bound to have "great inconsistencies, limitations, and uncertainties" due to the opacity of Google Scholar's technical functionalities. As Orduna-Malea *et al.* (2015) discussed, probably even Google Scholar doesn't know how big it is, as might be corroborated from the fact that Google Scholar has on multiple occasions encouraged scientometricians, infometricians, webometricians, and bibliometricians to conduct studies to assess its size.

We have relied on 2019 research by Gusenbauer<sup>[56]</sup> to finalise the database(s) used for literature search. Gusenbauer builds on and refines the existing scientometric research by "counting query hit data" to indicate the number of accessible records, and finds that Google Scholar's size might have been underestimated by previous researchers by more than 50%. Gusenbauer's research estimates Google Scholar to host approximately 389 million records and can be safely concluded to be the most comprehensive academic search engine. Hence, for the present research, we finalise Google Scholar to be our preferred literature search engine.

### Shortlisting and finalising the list of literatures

Two methods were employed (Figure 2) to ensure a comprehensive and detailed selection of literature: keyword search, and forward and backward search.<sup>[58]</sup> In employing keyword search, the keyword phrase "Consumer Choice" AND "antitrust" was put into Google Scholar and first 500 results (Table 5) were extracted. The 'Relevance' filter of the search engine was relied upon to assume that the top 500 search results are most relevant to the keyword searched. After arranging the 500 searched literature on a spreadsheet, another parallel search with keywords "Consumer Choice" AND "Competition Law" was also conducted employing a similar methodology, and non-duplicate results were combined together. A title sighting phase was undertaken to shortlist 149

**Table 4: Centrality.**

Centrality	References	DOI	Cluster ID
0.19	D Kahneman & A Tversky <sup>[32]</sup>	10.2307/1914185	5
0.14	JR Bettman <i>et al.</i> <sup>[16]</sup>	10.1086/209535	1
0.12	JW Payne <i>et al.</i> <sup>[28]</sup>		4
0.09	ME Ben-Akiva & SR Lerman <sup>[21]</sup>		2
0.09	KE Train <sup>[20]</sup>	10.1017/CBO9780511805271	2
0.09	I Ajzen <sup>[25]</sup>	10.1016/0749-5978(91)90020-T	3
0.08	KJ Lancaster <sup>[24]</sup>	10.1086/259131	3
0.07	R Dhar & K Wertenbroch <sup>[12]</sup>	10.1509/jmkr.37.1.60.18718	0
0.07	HA Simon <sup>[36]</sup>	10.2307/1884852	6
0.07	D McFadden & KE Train <sup>[22]</sup>	10.1108/EB028592	6

literatures for a thorough abstract sighting. A further shortlisting was done, and forward and backward search was employed to prepare the final list of 34 literature to be reviewed thoroughly.

### Interpretation of results

The topic of consumer choice in digital platform markets, as seen through the prism of antitrust law, is neither nascent nor esoteric. It has been the subject of extensive scrutiny, discourse, and academic endeavors. The literature on this subject, while voluminous, can be broadly divided into several thematic trajectories, each building upon or challenging the foundational premises of the others. The role of digital platforms in shaping, if not constraining, consumer choice has been dissected from multiple angles-economic, legal, sociological, and technological. Early literature often grappled with adapting traditional antitrust theories to the burgeoning digital landscape, attempting to fit the round peg of platform dynamics into the square hole of classic competition law. However, as the digital realm evolved, so too did the scholarship, becoming more nuanced and attuned to the specificities of digital markets. Behavioral nudges, with its capacity to subtly shape consumer preferences and choices, has been the focal point of numerous studies, debating its implications for both market competition and consumer welfare. Similarly, the monopolistic strategies employed by digital giants have not only been documented but also critiqued for their potential to stifle innovation and limit genuine consumer choice.

This literature review aims to traverse this vast academic terrain, synthesizing key arguments, highlighting seminal works, and identifying gaps or areas of contention. By collating diverse perspectives, we intend to provide a holistic understanding of the current scholarly landscape concerning antitrust implications for consumer choice in digital platform markets.

Drawing from an examination of extant literature, the corpus of scholarly works that delve into consumer choice within competition jurisprudence can be systematically classified into five distinct thematic clusters:

*Consumer Choice Jurisprudence:* provides the foundation for understanding how consumer choice has traditionally been viewed and interpreted within the legal framework. We have tried to present the reviewed literature in a chronological arrangement for this section, so as to facilitate better comprehension.

*Emerging Jurisprudence of Consumer Choice:* delves into how the traditional perspectives are evolving in light of modern market realities. This thematic cluster highlights the dynamic nature of the antitrust jurisprudence, and sets the stage for a more in-depth exploration of specific areas like consumer sovereignty and the economic implications.

*Consumer Sovereignty:* dives deeper into the concept of consumer sovereignty, which underpins much of the discussion around choice, and its legal as well as economic understanding. This thematic cluster provides a nuanced understanding of the agency consumers have (or lack) in making decisions in digital platform markets.

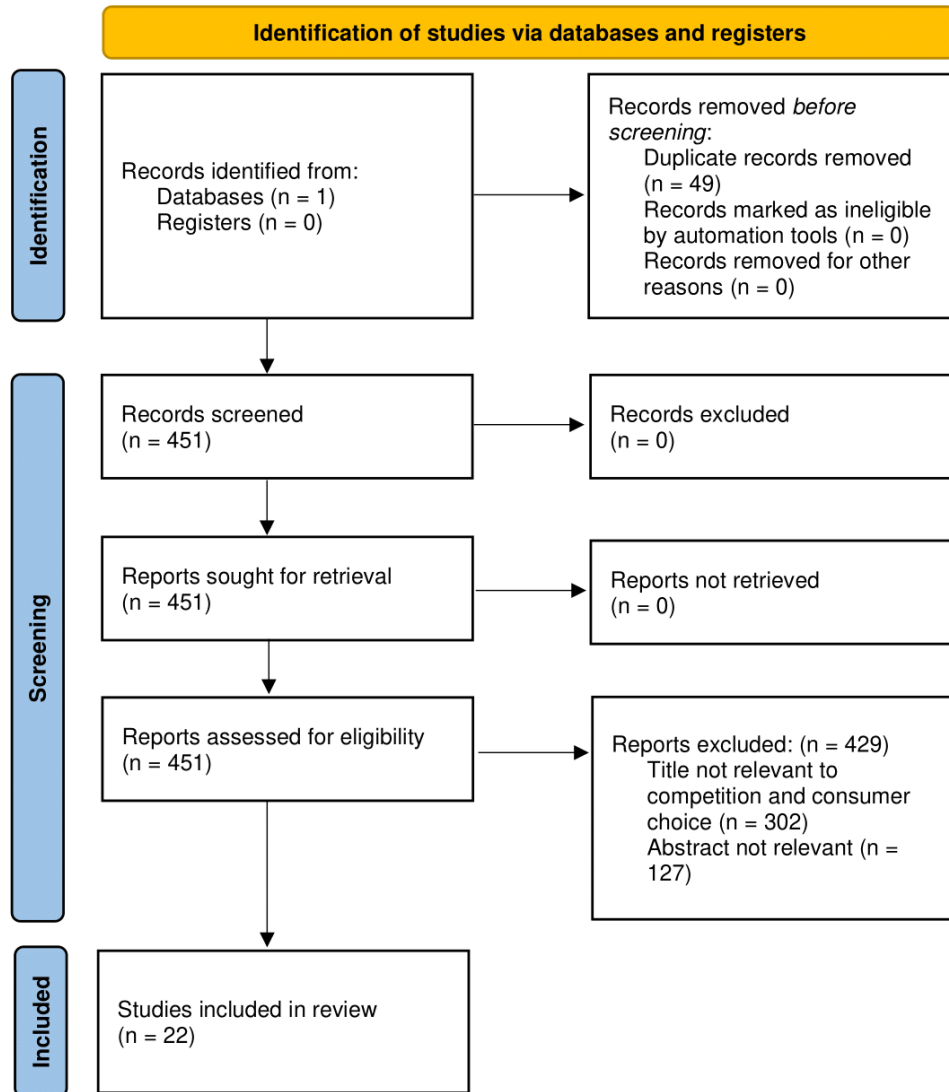
*Law & Economics of Consumer Choice:* discusses literature that delve into the market dynamics, exploring how legal frameworks intersect with economic realities, and how they impact consumer choice in tangible ways.

*Big Data and Consumer Choice:* This final cluster encapsulates a modern challenge that is reshaping all the previous themes. In the era of big data, understanding how data aggregation, processing, and utilization impact consumer choice is crucial. This theme ties back to all the previous sections but also points towards the future, highlighting the ongoing challenges and potential directions for both jurisprudence and market practices.

### Consumer Choice Jurisprudence

Antitrust jurisprudence, with its inherent interplay between legal, economic, and sociopolitical domains, has continuously evolved to address the complexities of consumer protection. Through the lens of literature over the decades, one can trace a compelling trajectory of thought paradigms that have enriched this discourse.





**Figure 2:** PRISMA 2020 flow diagram.<sup>[59]</sup>

**Table 5:** Literature search and shortlisting.

Shortlisting stage	No. of literature
Google Scholar query results	500
Title sighting	149
Duplicates	49
Abstract sighting	22
Forward and backward search	12
Total	34

The late 1990s marked a pivotal juncture in antitrust reflections. Averitt and Lande<sup>[60]</sup> delved into the symbiotic relationship between antitrust and consumer protection doctrines. Their discourse set the stage by emphasizing the paramount importance of a competitive marketplace, asserting that its integrity lies not just in economic gains but in preserving consumer sovereignty.

This sovereignty, they argued, was the bedrock on which market dynamics rested, ensuring that consumers' desires and choices weren't stifled by monopolistic tendencies.

In the subsequent years, the discourse's dimensions expanded. Lande<sup>[61]</sup> highlighted the importance of looking beyond mere

price competition. He asserted that in several sectors, especially those like communication media, an enriched marketplace was defined by innovation, qualitative betterments, and the plurality of choices. This move was foundational, suggesting that mere economic measurements could sometimes offer a myopic view of competition. By the mid-2000s, Averitt & Lande<sup>[62]</sup> revisited their earlier thesis, embedding it with richer empirical examinations. They dissected landmark antitrust litigations, showcasing instances where a consumer choice framework led to more holistic verdicts than when relying solely on traditional economic metrics.

Around this time, the Chicago School's antitrust doctrine-rooted deeply in the primacy of economic efficiency-faced robust academic challenges. Kirkwood and Lande<sup>[63]</sup> orchestrated one such challenge. They argued that undiluted adherence to the Chicago School's approach could sometimes blind policymakers and jurists to the risk of the inequitable distribution of market power and resources. This period was ripe for synthesis. Pioneers like Averitt<sup>[64]</sup> and Lande *et al.*<sup>[65]</sup> masterfully interwove threads from consumer protection and antitrust paradigms. Central to their argument was the proposition that 'choice' could serve as the crucible wherein these two streams could merge. Such an amalgamation, they believed, held the promise of a more integrated and human-centric approach to competition law.

Despite the rising tide in favor of consumer choice, voices of caution emerged. Wright and Ginsburg,<sup>[66]</sup> esteemed scholars in their right, made a compelling case for the indispensability of rigorous economic analysis. They believed that sidelining such foundational metrics could lead to jurisprudential myopia, potentially compromising genuine consumer welfare.

Lande's seminal contributions in 2011<sup>[67]</sup> and 2012<sup>[68]</sup> offered a forward-looking perspective. He extrapolated future trajectories for U.S. antitrust regulations, suggesting scenarios where consumer choice could potentially dethrone the hitherto unassailable tenets of economic efficiency. Simultaneously, Lande<sup>[69]</sup> engaged in a profound exploration of antitrust frameworks through traditional and textualist analysis of the goals of antitrust. He argued that these weren't just dry legislative tools but, when rightly interpreted, could be formidable shields for consumer protection.

### Emerging Jurisprudence of Consumer Choice

The contemporary consumer choice jurisprudence, rooted in both American and European competition law perspectives, has undergone substantial evolution in recent times. Beginning in the United States, Lande<sup>[70]</sup> initiated the discussion on the merger incipency doctrine which originated from the Celler-Kefauver Act. This doctrine, through cases like *Brown Shoe* and *Von's Grocery*, became a notable pillar of competition law enforcement before waning during the Reagan Administration, which favored economic efficiency. Lande proposed a reconceptualization,

suggesting that merger enforcement could be enhanced by recentring on its foundational principle: consumer choice. Further instruments, such as observing potential merger trends or a "sliding scale" for certain significant transactions, could better serve the original intentions behind the doctrine.

Waller<sup>[71]</sup> built upon Lande's consumer choice paradigm, underscoring its centrality in antitrust decision-making. A robust emphasis on 'consumer choice' was deemed pivotal for interpreting antitrust and consumer protection laws, especially given the inadequacy of solely relying on price theory. The modern digital age, dominated by giants such as Microsoft, Intel, and AOL/Time Warner, posed new challenges with firms potentially acting as gatekeepers and curtailing both competition and consumer choices. In domains with pronounced network effects and intellectual property rights, consumer choice became particularly salient. The same was true for the pharmaceutical sector, where actions such as delaying the entry of generic drugs had considerable cost implications for consumers.

Lande's later works in 2009<sup>[72]</sup> and 2010<sup>[73]</sup> shifted the focus towards the Federal Trade Commission (FTC) Act's Section 5. Arguing its broader ambit compared to the Sherman or Clayton Act, he believed that the consumer choice framework could offer precision to this expansive interpretation of Section 5. Specific issues, such as early signals of tying and exclusive dealing violations, showcased the practicality and benefits of this approach. This perspective ensured that public interest considerations remained paramount, setting a clear standard under Section 5, even when they might not fall under the Sherman Act's purview.

Shifting to Europe, Nihoul<sup>[74]</sup> examined the transformation in European competition policy, with a burgeoning emphasis on consumer choice. This change wasn't confined to the European Commission's decisions alone but permeated the judgments of European courts, including the General Court and the Court of Justice. Such a shift hinted at a foundational recalibration in how European institutions justified their interventions. Behrens<sup>[75]</sup> delved into the German roots of the "consumer choice" notion, a fundamental tenet of ordoliberal thought that has substantially shaped EU competition policy. Contrary to the conventional global narratives linking ordoliberalism exclusively to the post-WWII "Freiburg School," Behrens highlighted its continual evolution. Classical liberalism's principles, emphasizing the consumer's role in competition and the indispensability of open markets, have remained integral, even as ordoliberalism has modernized. Coniglio<sup>[76]</sup> reiterated this link, emphasizing that while the European Commission began with a solid ordoliberal foundation, the past three decades have seen a shift. The Commission, through measures like the 2008 Guidance, has leaned more towards a consumer welfare standard, rooted in economic considerations. This intertwining of ordoliberal principles with contemporary economic concerns reached a notable crescendo in the German Facebook case, as analyzed by

Wiedemann.<sup>[91]</sup> The Federal Supreme Court's decision heavily emphasized consumer choice and deliberated upon the theory of harm involving 'imposed extension of services'. The judgment analyses the notion of 'data as counter-performance', indicating a modern, nuanced understanding of consumer choice in the digital age.

Summarizing, the journey of consumer choice jurisprudence, traversing both American and European terrains, reflects the ongoing tensions between historical doctrines, economic standards, and evolving market realities.

### Consumer Sovereignty

The intersection of competition law and consumer choice has been extensively studied, aiming to achieve an environment where consumers are equipped with abundant choices and the empowerment to make decisions autonomously. This convergence between antitrust and consumer protection laws has led to the development of the notion of 'consumer sovereignty', an ideal explored by Averitt & Lande.<sup>[77]</sup> Their research draws attention to the significance of a competitive marketplace free from distortions like price-fixing or anticompetitive mergers, while concurrently underscoring the importance of consumer protection against deceptive practices. This duality is elucidated through the lens of "market failures", distinguishing external challenges posed by antitrust complications from the internal challenges in consumer protection, rooted within the consumer's decision-making process. Furthermore, Averitt & Lande's work highlights the central role of institutions like the FTC in navigating this dual mandate.

However, the digital era presents unique challenges. As posited by Podszun,<sup>11</sup> super-platforms, such as GAFA, have pivoted their business strategies from mere market facilitation to potentially manipulative practices targeting consumer behaviours. This raises concerns regarding consumers' incapacitation in making autonomous decisions, thereby disrupting traditional market dynamics. Podszun's hypothesis emphasizes recognizing such behavioural manipulations as a genuine 'theory of harm' in competition enforcement. Interestingly, he sheds light on the "agency problem", elucidating how gatekeepers, despite functioning practically as agents, escape the legal obligations typical of an agent's role. The multifold harm posed, as Podszun suggests, encompasses agency dilemmas, informational loss, innovation setbacks, and platform market tipping.

Complementing this discourse, Kuenzler<sup>[78]</sup> brings forth the increasing prominence of product design in antitrust scrutiny. Contrary to historical deference to firms over product design choices, contemporary antitrust analyses and subsequent legal interventions have begun centering on such choices, especially when they seemingly curtail consumer options. Notably, Kuenzler highlights that recent landmark cases against tech giants have been pivoted on product design choices, indicating a paradigm

shift. The prescribed remedies in these scenarios, instead of being restrictive, aim at reintegrating consumer choices, reflecting a more progressive approach to antitrust interventions.

Summarizing, the overarching concept of consumer sovereignty remains at the forefront of the evolving dialogue on competition law and consumer choice. As the digital landscape transforms, bringing new challenges and complexities, the literature increasingly suggests a need for adaptability in jurisprudential frameworks, ensuring that consumers remain sovereign even in the face of rapidly shifting market dynamics.

### Law & Economics of Consumer Choice

The law and economics of consumer choice manifests as a critical intersection where economic models, consumer behavior, and legal frameworks collide. A key underpinning of this relationship is the continual evolution in the understanding and application of consumer choice within antitrust and competition law. In this section, we aim to thread together the insights provided by seminal works in the field to construct a comprehensive narrative.

James<sup>[79]</sup> underscores a pivotal shift in economic focus. Traditional economic models prioritized production optimization, effectively sidelining the intricacies of individual consumer optimization. This longstanding emphasis on the traditional theory of demand meant that the dynamism of consumer choice, rooted in characteristics embodied within products, was largely overlooked. Lancaster's model,<sup>[24]</sup> emerging from this characteristics-oriented shift, presents an enticing parallel between producer and consumer realms. It equates efficient consumption with maximum welfare, mirroring the producer's profit maximization objective. However, as James highlights, determining a nexus between individual efficiency and welfare becomes intricate, given personal trade-offs and constraints. While challenges remain, the characteristics framework illuminates the multi-stage model of consumption.

Choi<sup>[80]</sup> delves into product incompatibility across generations, examining the rationale behind monopolistic decisions to render new products incompatible with their predecessors. Such strategic incompatibility touches on consumer choice by manipulating repurchase behaviors, reflecting a calculated trade-off between immediate profit and potential market size. Herein lies a crucial dilemma: monopolistic strategies around planned obsolescence can distort consumption patterns, possibly leading to overconsumption or underconsumption. Such distortions hint at the nuanced intersections between consumer choice and monopolistic market behaviors.

Gundlach<sup>[81]</sup> positions choice as central to exchange mechanisms. By highlighting choice as the linchpin of competitive behavior, the discourse shifts from mere price competition to a more holistic consideration of exchange options. Through this lens, antitrust discussions become enmeshed with the determinants of free

choice, thereby enhancing the understanding of anti-competitive practices.

Leary<sup>[82]</sup> provocatively shifts the focus from price to variety, suggesting that antitrust considerations might benefit from an expanded examination of non-price variables. This perspective is pertinent given the diversity of consumer preferences, emphasizing the interplay between predictability and accuracy in antitrust enforcement. Guiltinan<sup>[83]</sup> further accentuates this discourse by emphasizing non-price dimensions of choice. By juxtaposing insights from marketing with conventional antitrust analysis, Guiltinan emphasizes the untapped potential of marketing knowledge in shaping antitrust perspectives.

The urgency for a dynamic approach becomes evident in Petty's<sup>[84]</sup> critique of conventional antitrust analysis. By championing nonprice competition factors like innovation and product variety, Petty posits that consumers stand to gain from a more comprehensive range of choices. This perspective illuminates the role of dynamic market evolution in shaping consumer choice.

Olsen<sup>[85]</sup> provides a historical backdrop by tracing the influence of the Chicago School of Economics on deregulation policies. A central theme is the evolution of the "efficient consumer" notion. In this intellectual transition, traditional consumer choice gives way to a focus on consumer welfare, defined largely in terms of economic efficiency.

Lastly, Petty's subsequent work<sup>[86]</sup> reinforces the evolving nature of antitrust analysis, advocating for a more holistic embrace of product options and consumer choice. By delineating product strategies into Lock-outs, Lock-ins, and Hold-ups, Petty provides a pragmatic approach to navigating the intricacies of consumer choice in antitrust contexts.

Summarizing, the law and economics of consumer choice, as reflected in the aforementioned works, offers a kaleidoscopic view into the evolving dynamics of consumption, competition, and market strategies. Whether through the lens of product characteristics, monopolistic strategies, choice-driven behaviors, variety, non-price competition dimensions, or dynamic market evolutions, these works collectively elucidate the multifaceted nature of consumer choice and its profound implications in competition law.

## Big Data and Consumer Choice

Consumer choice, particularly in the digital age dominated by Big Tech and Big Data, is a complex and rapidly evolving paradigm. At its core, this notion embodies the principle of autonomy and agency, allowing consumers to independently make choices that are reflective of their preferences and interests. However, the exponential growth of technology and the market structures of Big Tech entities have given rise to several intriguing paradoxes and challenges.

Andre *et al.*<sup>[87]</sup> delve deeply into one such paradox: that advancements such as AI-driven recommendation systems, autonomous devices, and data-centric marketing tools, while designed to improve choice efficiency and relevance, might inadvertently erode the very essence of choice autonomy. These technologies, though ostensibly enhancing consumer welfare, risk engendering a counteractive sense of reactance among consumers. The underlying cause being a perceived detachment from decision-making processes, which are perceived as being increasingly commandeered by elusive algorithms. Hence, the very systems meant to empower consumers through better choices could, paradoxically, be diminishing their sense of control.

However, it is not just the intricate algorithms and technology that pose challenges to consumer choice; the legal landscape is equally turbulent. Historically, antitrust and consumer protection operated in distinct realms, dealing with firm-to-firm and firm-to-consumer interactions, respectively. Yet, as Jin & Wagman<sup>[88]</sup> elucidate, the advent of Big Data has blurred these demarcations. Their exploration underscores the complexities associated with data governance. For instance, while the European Union's GDPR positions consumers at the helm of their data, vesting them with extensive rights, it's imperative to question the efficacy of this approach given consumers' inherent information asymmetry and bounded rationality. Conversely, if firms are entrusted with this governance role, it brings to the fore traditional concerns of market power and asymmetric information.

Such concerns are further amplified when examining the nuances of data protection and competition law, both of which fundamentally revolve around consumer choice and consent. Kellezi<sup>[89]</sup> offers a penetrating analysis of this intersection, contending that ostensibly rigid conditions, even when devised to invigorate competition, can inadvertently stifle consumer choice. This viewpoint gains traction especially when considering the practices of tech behemoths like Google, Amazon, and Facebook, as discussed by Gormsen.<sup>[90]</sup> The very architecture of these platforms, driven by big data and AI, seems to be directing consumers along predetermined paths, thereby sculpting a marketplace that offers less diversity for the consumers and fewer entry points for suppliers.

Given the intricate web of challenges, it's evident that traditional compartmentalized approaches are obsolete. Kerber & Zolna<sup>[91]</sup> offer a compelling proposition in this regard: a "minimum standard of choice" model. This suggests a more holistic and integrative approach, merging competition law with data protection law to ensure that the overarching aim of safeguarding and promoting consumer choice remains paramount.

In conclusion, as Big Tech and Big Data continue to redefine the contours of the digital ecosystem, a renewed understanding and reconceptualization of consumer choice become imperative. Only through such an interdisciplinary and integrated lens can



policymakers, academics, and industry stakeholders ensure that consumers truly remain at the center of this evolving digital narrative.

## CONCLUSION

The evolving notion of consumer choice in competition law is emblematic of the shifting sands of jurisprudential and economic thought, coupled with transformative technological advances in the digital age. The literature review journeyed through five fundamental themes, weaving a narrative that mirrors the expansion and complexity of consumer interactions and marketplace dynamics. Starting with foundational jurisprudence, it's clear that the origins of competition law prioritized the promotion of consumer choice as a fundamental tenet. This core belief rested on the premise that competitive markets would best serve consumers by offering them a plethora of options in terms of quality, price, and other salient variables. Yet, as the emerging jurisprudence suggests, this perspective has faced growing challenges over the years. The increasing complexities in market behavior, strategic firm conduct, and regulatory considerations prompted a re-evaluation of the way we approach consumer choice. Delving into the concept of consumer sovereignty, it's evident that while the theoretical underpinnings of this idea provide consumers with the power to dictate market outcomes, the reality is far more nuanced. The disparities between consumer knowledge, bargaining power, and the information asymmetry between them and the firms underscore the vulnerability of this sovereignty. The Law and Economics of Consumer Choice further refines our understanding by offering an analytical lens that identifies the potential pitfalls and inefficiencies in market behavior. This theme also elucidates that consumer choice is not merely about providing a multitude of options but ensuring that those choices lead to the overall welfare of the consumers. The final theme takes a stark turn into the modern digital age, where the playing field is dominated by Big Tech and Big Data. With technology giants holding unparalleled influence over market dynamics and consumer behavior, competition law finds itself at a crossroads. The vast amounts of data these entities possess raise questions about privacy, data security, and the very essence of free choice. Can genuine consumer choice exist in an environment overshadowed by algorithmic decisions, data-driven personalized marketing, and oligopolistic market structures? Concluding, the review reveals a clear trajectory from the black-and-white delineations of early competition law, emphasizing simple variety, to the multitudinous shades of gray that now color consumer choice. As the landscape of competition continues to metamorphose, it is paramount for competition law to adapt and evolve. It must strike a balance between facilitating genuine consumer choice, ensuring market efficiencies, and navigating the minefields posed by technological giants. This task is daunting but crucial in preserving the integrity and spirit of competition for the modern consumer's benefit.

Use of bibliometric analysis to inform a literature review is a contested practice, having prospects as well as limitations. Starting with limitations, the paper's reliance on document co-citation network analysis, while effective in discerning established thematic clusters and influential works, carries a limitation in its potential oversight of nascent research areas. This approach, emphasizing the interconnections among frequently cited documents, may inadvertently marginalize emerging topics or novel perspectives that have not yet garnered extensive citations. Consequently, this could lead to an underrepresentation of cutting-edge or evolving discussions within the field, which are critical for a comprehensive understanding of the dynamic landscape of antitrust jurisprudence in digital platform markets. Several studies have thus suggested alternative methods for literature analysis, including co-authorship networks<sup>[92]</sup> and article quality indicators.<sup>[93]</sup>

However, despite the limitations of such an approach, it offers significant benefits in bibliometric studies, especially in fields like antitrust jurisprudence. This method excels in revealing the intellectual structure and evolution of a research field by identifying core thematic clusters and key publications. Such insights are invaluable in understanding established discourse and foundational theories, which are essential for contextualizing new research within the broader academic landscape. Moreover, by focusing on widely cited works, this approach ensures the inclusion of influential and recognized studies, thereby maintaining a high standard of academic rigor. In this context, the benefits of a coherent and comprehensive understanding of the field, derived from well-established research, significantly outweigh the limitations of potentially overlooking more recent, less-cited works.

Furthermore, the proposed framework acknowledges the inherent interconnectedness and complexity of legal issues, which often transcend disciplinary boundaries. By embracing scientometric tools and techniques, researchers can unravel the intricate web of relationships and interdependencies that characterize legal phenomena, thereby illuminating hitherto obscured nuances and complexities. The implementation of this rigorous and systematic methodology holds the promise of enhancing the comprehensiveness, objectivity, and depth of legal research. By supplanting traditional, potentially arbitrary approaches with a well-defined methodological framework grounded in scientometric tools and techniques, researchers can contribute to a more profound and nuanced understanding of the intricate legal landscape, ultimately advancing the frontiers of legal scholarship.

## CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

## REFERENCES

- McKenzie RB, Lee DR. How Digital Economics Revises Antitrust Thinking. *The Antitrust Bulletin*. 2001;46(2):253-98. DOI: 10.1177/0003603X0104600202.
- Oldenbourg A. Digital freedom and corporate power in social media. *Critical Review of International Social and Political Philosophy*. 2022;27(3):383-404. doi: 10.1080/13698230.2022.2113229.
- Makridis CA, Thayer J. The big tech antitrust paradox: reevaluation of the consumer welfare standard for digital markets. *Stanford Technology Law Review*. 2023;27(1):71-126.
- Sunstein CR. *#Republic: Divided Democracy in the Age of Social Media*. Princeton: Princeton University Press; 2017.
- Luca M. Reviews, Reputation, and Revenue: The Case of Yelp.com. *Harvard Business School Working Paper* 12-016, at [https://www.hbs.edu/ris/Publication%20Files/12-016\\_a7e4a5a2-03f9-490d-b093-8f951238dba2.pdf](https://www.hbs.edu/ris/Publication%20Files/12-016_a7e4a5a2-03f9-490d-b093-8f951238dba2.pdf).
- Al-Raei Marwan. Study of sustainable development goals of Syrian higher education: strategy, effects and future insights. *Arab Gulf Journal of Scientific Research* 2023; ahead-of-print, DOI:10.1108/AGJSR-04-2023-0153.
- Sarkar A *et al*. The impact of co-creation and co-invention in supply chains: a bibliometric review. *Arab Gulf Journal of Scientific Research* 2022;40(4):364-91. doi: 10.1108/AGJSR-04-2022-0010.
- Chen C, Ibekwe-Sanjuan F, Hou J. The Structure and Dynamics of Co-Citation Clusters: A Multiple-Perspective Co-Citation Analysis. *J Am Soc Inf Sci Technol*. 2010;61(7):1386-409.
- Chen C. Searching for intellectual turning points: Progressive knowledge domain visualization. *Proc Natl Acad Sci U S A*. 2004; 101(Suppl 1):5303-10. doi: 10.1073/pnas.0307513100.
- Zheng L. Using mutual information as a cocitation similarity measure. *Scientometrics*. 2019;119:1695-705.
- Whitley SC. The influence of purchase motivation on perceived preference uniqueness and assortment size choice. *J Consum Res*. 2018;45:15-31.
- Dhar R, Wertenbroch K. Consumer choice between hedonic and utilitarian goods. *J Mark Res*. 2000;37:60-71.
- Okada EM. Justification effects on consumer choice of hedonic and utilitarian goods. *J Mark Res*. 2005;42:43-53.
- Hirschman EC, Holbrook MB. Hedonic consumption: Emerging concepts, methods and propositions. *J Mark*. 1982;46:92-101.
- Botti S, Iyengar SS, McGill AL. Choice freedom. *J Consum Psychol*. 2022;33:143-55.
- Bettman JR, Luce MF, Payne JW. Constructive consumer choice processes. *J Consum Res*. 1998;25:187-217.
- Iyengar SS, Lepper MR. When choice is demotivating: Can one desire too much of a good thing? *J Pers Soc Psychol*. 2000;79:995-1006.
- Simonson I. Choice based on reasons: The case of attraction and compromise effects. *J Consumer Res*. 1989;16:158-74.
- Li H, Huh WT. Pricing multiple products with the multinomial logit and nested logit models: Concavity and implications. *Manufacturing and Service Operations Management*. 2011;13:419-31.
- Train KE. *Discrete Choice Methods with Simulation*. 2nd ed. Cambridge: Cambridge University Press; 2009.
- Ben-Akiva M, Lerman SR. *Discrete Choice Analysis: Theory and Application to Travel Demand*. Cambridge, Mass.: MIT Press; 1985.
- McFadden D, Train K. Mixed MNL models for discrete response. *J Appl Economet*. 2000;15:447-70.
- Rodríguez-Entrena M, Salazar-Ordóñez M, Sayadi S. Applying Partial Least Squares to Model Genetically Modified Food Purchase Intentions in Southern Spain Consumers. *Food Policy*. 2013;40:44-53.
- Lancaster KJ. A new approach to consumer theory. *J Polit Econ*. 1966;74:132-57.
- Ajzen I. The theory of planned behavior. *Organ Behav Hum Decis Process*. 1991;50:179-211.
- Aertsens J, Verbeke W, Mondelaers K, Van Huylenbroeck G. Personal determinants of organic food consumption: a review. *Br Food J*. 2009;111(10):1140-67.
- Kolstad JT, Chernew ME. Quality and consumer decision making in the market for health insurance and health care services. *Med Care Res Rev*. 2009; 66(6):28-52.
- Payne JW, Bettman JR, Johnson EJ. *The adaptive decision maker*. Cambridge: Cambridge University Press; 1993.
- Green PE, Srinivasan V. Conjoint analysis in marketing: New developments with implications for research and practice. *J Mark*. 1990;54:3-19.
- Jin GZ, Sorensen AT. Information and consumer choice: The value of publicized health plan ratings. *J Health Econ*. 2006;25:248-75.
- Sælensminde K. Causes and consequences of lexicographic choices in stated choice studies. *Ecol Econ*. 2006;59:331-42.
- Tversky A, Kahneman D. Prospect theory: An analysis of decision under risk. *Econometrica*. 1979;47(2):263-92.
- Louviere JJ, Hensher DA, Swait JD, Adamowicz W. *Stated choice methods: analysis and applications*. Cambridge: Cambridge University Press; 2010.
- Swait J, Adamowicz W. The influence of task complexity on consumer choice: A latent class model of decision strategy switching. *J Consum Res*. 2001;28(1):135-48.
- Wedel M, Pieters R, van der Lans R. Modeling eye movements during decision making: A review. *Psychometrika*. 2023;88(2):697-729.
- Simon HA. A behavioral model of rational choice. *The Quarterly Journal of Economics*. 1955;69(1):99-118.
- Sippel K, Kasneci E, Aehling K, Heister M, Rosenstiel W, Schiefer U, *et al*. Binocular glaucomatous visual field loss and its impact on visual exploration-a supermarket study. *PLoS One*. 2014;9(8):e106089.
- Chevalier JA, Mayzlin D. The effect of word of mouth on sales: online book reviews. *J Mark Res*. 2006;43(3):345-54.
- Alba J, Lynch J, Weitz B, Janiszewski C, Lutz R, Sawyer A, *et al*. Interactive home shopping: Consumer, retailer, and manufacturer incentives to participate in electronic marketplaces. *J Mark*. 1997;61(3):38-53.
- Reale S, Flint SW. The impact of menu label design on visual attention, food choice and recognition: an eye tracking study. *J Sens Stud*. 2016;31(4):328-40.
- Bettman JR. Memory factors in consumer choice: A review. *J Market*. 1979;43(2):37-37.
- Cowburn G, Stockley L. Consumer understanding and use of nutrition labelling: a systematic review. *Public Health Nutr*. 2005;8(1):21-8.
- Rosenau PV, Lako CJ. An experiment with regulated competition and individual mandates for universal health care: the new Dutch health insurance system. *J Health Polit Policy Law*. 2008;33(6):1031-55.
- Catlin A, Cowan C, Heffler S, Washington B, National Health Expenditure Accounts Team. National health spending in 2005: the slowdown continues. *Health Aff (Millwood)*. 2007;26(1):142-53.
- Enthoven AC, van de Ven WPM. Going Dutch- Managed-Competition Health Insurance in the Netherlands. *N Engl J Med*. 2007;357(24):2421-3.
- Cutler DM, McClellan M, Newhouse JP. How does managed care do it? *Rand J Econ*. 2000;31(3):526-48.
- Asemi A, Heydari M. Correlation between the Articles Citations in Web of Science (WoS) and the Readership Rate in Mendeley and Research Gate (RG). *Journal of Scientometric Research*. 2019;7(3):145-52. DOI:10.5530/jscires.7.3.25.
- Bolin JH, Hayes AF. Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. *J Educ Meas*. 2014;51:335.
- Thaler R. Toward a positive theory of consumer choice. *J Econ Behav Organ*. 1980;1(1):39-60.
- Hayes AF. Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Commun Monogr*. 2018;85(1):4-40.
- Shafir E, Simonson I, Tversky A. Reason-based choice. *Cognition*. 1993;49(1-2):11-36.
- Sela A, Berger J, Liu W. Variety, vice, and virtue: How assortment size influences option choice. *J Consum Res*. 2009;35(6):941-51.
- Chen C. CiteSpace II: Detecting and visualizing emerging trends and transient patterns in scientific literature. *J Am Soc Inf Sci Technol*. 2006;57(3):359-77.
- Haines LL, Light J, O'Malley D, Delwiche FA. Information-seeking behavior of basic science researchers: implications for library services. *J Med Libr Assoc*. 2010;98(1):73-81.
- Ortega JL. *Academic search engines: a quantitative outlook*. Amsterdam: Elsevier Science; 2014.
- Gusenbauer M. Google Scholar to overshadow them all? Comparing the sizes of 12 academic search engines and bibliographic databases. *Scientometrics*. 2019;118(1):177-214.
- Mayr P, Walter AK. An exploratory study of Google Scholar. *Online Information Review*. 2007;31(6):814-30.; see also Aguillo IF. Is Google Scholar useful for bibliometrics? A webometric analysis. *Scientometrics*. 2012;91(2):343-51; see also Khabsa M, Giles CL. The number of scholarly documents on the public web. *PLoS ONE*. 2014;9(5):e93949; see also Orduna-Malea E, Ayllón JM, Martín-Martín A, *et al*. Methods for estimating the size of Google Scholar. *Scientometrics*. 2015;104(3):931-49.
- Webster J, Watson RT. Analyzing the past to prepare for the future: Writing a literature review. *MIS Q*. 2002;26(2).
- Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, *et al*. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71.
- Averitt NW, Lande RH. Consumer Choice: The Practical Reason for Both Antitrust and Consumer Protection Law. *Loy Consum L Rev*. 1998;10(1):44.
- Lande RH. Consumer choice as the ultimate goal of antitrust. *Univ Pitt Law Rev*. 2000;62:503.
- Averitt NW, Lande RH. Using the "consumer choice" approach to antitrust law. *Antitrust Law J*. 2007;74(1):175-264.
- Kirkwood J, Lande R. The Chicago School's Foundation Is Flawed: Antitrust Protects Consumers, Not Efficiency. In: Pitofsky R, editor. *How the Chicago School Overshot the Mark: The Effect of Conservative Economic Analysis on U.S. Antitrust*. Oxford: Oxford University Press; 2008. p. 89.
- Averitt N. Protecting Consumer Choice: Competition and Consumer Protection Law Together. In: Drexel J, Grimes WS, Jones CA, Peritz RJR, Swaine ET, editors. *More Common Ground for International Competition Law?* Edward Elgar Publishing; 2011.
- Averitt NW, Lande RH, Nihoul P. 'Consumer Choice' is Where We are All Going - So Let's Go Together. *Concurrences Revue des Droits de la Concurrence*. 2011;2:1-3.

66. Wright JD, Ginsburg DH. The Goals of Antitrust: Welfare Trumps Choice. *Fordham L Rev.* 2013;81(5):2405.
67. Lande RH. Consumer choice as the best way to recenter the mission of competition law. In: Drexel J, Grimes WS, Jones CA, Peritz RJR, Swaine ET, editors. *More Common Ground for International Competition Law?* Edward Elgar; 2011. p. 21.
68. Lande RH. Consumer Choice as the Best Way to Describe the Goals of Competition Law. University of Baltimore School of Law Legal Studies Research Paper. 2012 Aug 14. Available from: [https://scholarworks.law.ubalt.edu/all\\_fac/735/&#8203](https://scholarworks.law.ubalt.edu/all_fac/735/&#8203).
69. Lande RH. A traditional and textualist analysis of the goals of antitrust: Efficiency, preventing theft from consumers, and consumer choice. *Fordham Law Rev.* 2013;81:2349-82.
70. Lande R. Resurrecting Incipency: From Von's Grocery to Consumer Choice. *Antitrust Law J.* 2001;68:875.
71. Waller SW. Antitrust as Consumer Choice: Comments on the New Paradigm. *University of Pittsburgh Law Review.* 2001;62:535.
72. Lande RH. Revitalizing Section 5 of the FTC Act Using 'Consumer Choice' Analysis. *Antitrust Source.* 2009;8(3).
73. Lande RH. FTC v. Intel: Applying the 'Consumer Choice' Framework to 'Pure' Section 5 Allegations. *CPI Antitrust J.* 2010;2(1):1.
74. Nihoul P. Freedom of choice: The emergence of a powerful concept in European competition law. *Concurrences.* 2012;(3):54-70.
75. Behrens P. The 'Consumer Choice' Paradigm in German Ordoliberalism and its Impact Upon EU Competition Law. Europa-Kolleg Hamburg, Discussion Paper No. 1/14; 2014.
76. Coniglio J. Rejecting the ordoliberal standard of consumer choice and making consumer welfare the hallmark of an antitrust Atlanticism. *CPI Antitrust Chron.* 2017;1(2):2.
77. Averitt N, Lande R. Consumer sovereignty: A unified theory of antitrust and consumer protection law. *Antitrust Law J.* 1997;65:713.
78. Kuenzler A. The Shadow of Digital Antitrust: The Law's Purported Deference to Leading Actors' Product Design Choices. *Concurrences.* 2022;(4):1.
79. James J. *Consumer Choice in the Third World: A Study of the Welfare Effects of Advertising and New Products in a Developing Country.* New York: St. Martin's Press; 1983.
80. Choi JP. Network externality, compatibility choice, and planned obsolescence. *J Ind Econ.* 1994;42(2):167-82.
81. Gundlach GT. Choice as the focus of antitrust: A marketing perspective. *Univ Pitt Law Rev.* 2001;62:527.
82. Leary TB. The significance of variety in antitrust analysis. *Antitrust Law J.* 2001;68:1007-22.
83. Gultinan J. Choice and Variety in Antitrust Law: A Marketing Perspective. *J Public Policy Mark.* 2002;21:260-68.
84. Petty RD. Limiting Product Choice: Innovation, Market Evolution, and Antitrust. *J Public Policy Mark.* 2002;21:269-74.
85. Olsen N. From Choice to Welfare: The Concept of the Consumer in the Chicago School of Economics. *Modern Intellectual History.* 2017;14(2):507-35.
86. Petty RD. Product strategy and antitrust: A consumer choice perspective. *J Consum Aff.* 2018;52(2):252-85.
87. André Q, Carmon Z, Wertenbroch K, Crum A, Frank D, Goldstein W, et al. Consumer choice and autonomy in the age of artificial intelligence and big data. *Customer Needs Solutions.* 2018;5:28-37.
88. Jin GZ, Wagman L. Big data at the crossroads of antitrust and consumer protection. *Inform Econ Policy.* 2021;54:100865.
89. Kellezi P. Consumer choice and consent in data protection. *Antitrust Chron.* 2021 Jan 18.
90. Gormsen LL. Algorithmic Antitrust and Consumer Choice. In: Portuese A, editor. *Algorithmic Antitrust. Economic Analysis of Law in European Legal Scholarship.* Vol. 12. Cham: Springer; 2022.
91. Kerber W, Zolna KK. The German Facebook case: the law and economics of the relationship between competition and data protection law. *Eur J Law Econ.* 2022;54(2):217-50.
92. Koseoglu MA, Yıldız M, Putra ED, Ciftci T. Co-Authorship Networks in Business Ethics: A Longitudinal Study. *Journal of Scientometric Research.* 2019;7(3):201-9. DOI: 10.5530/jscires.7.3.32.
93. Ghazavi R, Taheri B, Ashrafi-rizi H. Article Quality Indicator: Proposing a New Indicator for Measuring Article Quality in Scopus and Web of Science. *JSCIRES [Internet].* 2019;8(1):09-17. DOI: 10.5530/jscires.8.1.2.

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