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ARTICLE

The Arc of Antitrust: A Text-based Measure of Antitrust Policy Beliefs and Attitudes

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Abstract. This article employs a machine learning classifier, trained on a curated dataset comprising blog posts and other antitrust-related texts, to generate an index that categorizes texts along an ideological spectrum that ranges from Chicago School thinking at one end to a Neo-Brandeisian perspective at the other. The index is used to explore a diverse corpora of antitrust texts, shedding light on the evolving landscape of beliefs and attitudes over time. These corpora include antitrust blogs, an official Federal Trade Commission (FTC) blog, speeches by FTC commissioners and Department of Justice (DOJ) officials, as well as antitrust guidelines and legislation. The results show the arc of antitrust in the US, that is, the shift from interventionist Brandeisian thinking until the late seventies, followed by several decades of Chicago School-inspired, more permissive antitrust, and more recently, a discernible reversal towards a more (Neo-)Brandeisian position.

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I. Introduction

Antitrust has long been a contentious issue Jeffersonian ideals have permeated the country's beliefs since its foundation. These ideals yearn for an economy dominated by local producers and small businesses, protected from the ravages of large predatory corporations that seek to monopolize markets and politics.[1] Yet, the rise of large trusts and robber barons in the Gilded Age challenged those Jeffersonian ideals by presenting a Hamiltonian reality of concentrated economic and political power marked by the suppression of competition. The reaction to this reality came in the form of the Sherman Act in 1890, the first legislation aimed at preventing anticompetitive behavior and the abuse of economic power. This was strengthened in 1914 with the Clayton Act that regulated mergers and the creation of the Federal Trade Commission as the agency in charge of pursuing antitrust policy. In that same year Louis D. Brandeis coined the term "curse of bigness" in a publication titled "Other people's money and how bankers use it," where he argued that monopolies and large conglomerates stifled competition and led to economic inequality.[2] As a Supreme Court justice from 1916 to 1939, he came to embody the belief in a progressive antitrust policy through advocacy of the enforcement of antitrust laws to break up large corporations and promote competition, which he saw as essential for preserving democracy and ensuring a more credible and just society.

During the 1960's and 1970's, antitrust policy pursued by the FTC became highly interventionist, with strict regulation of mergers and acquisitions, prosecution of perceived antitrust violations and imposition of structural remedies. Investigations and prosecution were pursued in markets as diverse as advertising aimed at children, used cars, insurance, undertakers and other professional organizations, oil companies, breakfast cereals, among many others.[3] This proactive attitude was influenced both by Congress, where interventionist interests prevailed, and by courts, whose rulings set legal precedent determining the likelihood of antitrust regulators' success in court. On at least three occasions, the courts held mergers as unlawful where the combined market share of the new entity was in the single digits thus posing no threat to competition. In the prominent Brown Shoe case, a merger was blocked because it reduced costs and improved product quality, which harmed

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[1] Paul H. Brietzke, *The Constitutionalization of Antitrust: Jefferson, Madison, Hamilton, and Thomas C. Arthur*, 22 VAL. U. L. REV. 275 (1987).

[2] LOUIS DEMBITZ BRANDEIS, OTHER PEOPLE'S MONEY, AND HOW THE BANKERS USE IT (1914).

[3] Barry R. Weingast & Mark J. Moran, *Bureaucratic Discretion or Congressional Control? Regulatory Policy Making by the Federal Trade Commission*, 91 Journal of Political Economy 765 (1983).

smaller rivals.[4] The intellectual basis for these actions was the structure-conduct-performance framework associated with Joe Bain, that posits a one-way chain of causation from market structure (number and size of firms) to firm behavior (higher prices and profits). This approach justified treating concentration measures as a proxy for competition, which resulted in high levels of antitrust intervention.[5]

This approach was challenged and largely debunked by the late 1970s through the rise of the Chicago School of antitrust analysis. Work by early pioneers, such as Aaron Director, George Stigler, Richard Posner, Robert Bork and Frank Easterbrook shifted the focus from market structure to emphasis on efficiency of market outcomes and promoting consumer welfare. More firmly based on sound economic theory and empirical evidence than previous approaches, the Chicago School pointed out several flaws and shortcomings of extant antitrust policy, for example by noting that causality might run from performance to structure, as when more efficient firms gain market share due to superior performance. The new approach had a profound influence on antitrust enforcement and has been the dominant paradigm since the early 1980s.[6] By instituting a presumption that in the absence of evidence to the contrary markets were efficient and procompetitive, this change marked the tipping point in antitrust attitudes in the U.S. It led, for example, to the abandonment of the per se prohibition of non-price vertical restraints by the Supreme Court in 1977 and the use of the rule of reason on such practices thereafter.[7]

Many of the assumptions and methods of the Chicago School would come to be challenged by what became known as the post-Chicago School of antitrust analysis, which incorporated game theory and a more dynamic view of competition that showed that anti-competitive behavior could arise in a series of circumstances that the Chicago School had deemed impossible or highly unlikely.[8] Post-Chicago analysis maintained the emphasis on economic theory and the maximization of consumer welfare as the sole focus of antitrust, but argued that the Chicago School, despite having played an important role in debunking unfounded antitrust practices, had "overshot the mark" leading to acceptance by courts of erroneous economic

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[4] Herbert Hovenkamp, *Brown Shoe Merger Policy and the Glorification of Waste*, COMPETITION POL'Y INT'L (Dec. 15, 2023).

[5] John Sutton, *Market Structure: Theory and Evidence, in* HANDBOOK OF INDUSTRIAL ORGANIZATION 2301, 2368 (2007).

[6] Filippo Lancieri, Eric A. Posner, & Luigi Zingales, *The Political Economy of the Decline of Antitrust Enforcement in the United States* (Nat'l Bureau of Econ. Rsch., Working Paper No. 104, 2022).

[7] Ittai Paldor, *Vertical Restraints' Paradox: Justifying the Different Legal Treatment of Price and Non-Price Vertical Restraints* (2007), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=951609.

[8] Nicolas Petit, Heiden Bowman, & Thibault Schrepel, *Situating Dynamic Competition: An Evolution Beyond Chicago* (Dynamic Competition Imitative, Working Paper No. 1, 2024).

principles that have pushed towards antitrust inaction to the detriment of consumers.[9] One example is the Chicago School's reasoning that predatory pricing is rarely rational, as it is costly and new entrants can always emerge once prices are increased. The-Post Chicago School showed that there are plausible situations where predatory pricing can be a rational strategy.

The enduring influence of the Chicago School has not been so much in the realm of academic ideas but primarily through traction achieved in legal and policy circles, influencing the development of antitrust jurisprudence. The approach provided judges with a clear and straightforward analytical framework that focused narrowly on efficiency and consumer welfare, providing a more easily understandable set of tools and principles than previous doctrines. The result was a sense of greater rigor, greater empirical grounding, and a more practical approach to dealing with the complexities of antitrust.[10]

But as the dominance of the Chicago School approach has reached its fourth decade, the state of many markets and the economy in the US has given rise to antitrust discontents. With increasing trends in ownership concentration in many industries and a growing share of profits accruing to owners in detriment of workers, together with the rise of ever more powerful superstar firms, many have come to feel that the antitrust process may be rigged in favor of powerful interests.[11] This state of affairs has given rise to the Neo-Brandeisian approach to antitrust that has gained considerable traction in antitrust circles including the appointment by the Biden administration of an FTC chairwoman and a DOJ attorney general for antitrust fully committed to a new agenda of more interventionist policy focused on an expanded set of objectives including promoting democracy, protecting small businesses and

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[9] Christopher S. Yoo, *The Post-Chicago Antitrust Revolution: A Retrospective*, 168 U. Penn. L. Review 2145 (2020) (provides a thorough comparison of Chicago School, Post-Chicago School, and Neo-Brandeisian thinking, including useful discussion on the strengths and limitations of each); ROBERT PITOFSKY, HOW THE CHICAGO SCHOOL OVERSHOT THE MARK: THE EFFECT OF CONSERVATIVE ECONOMIC ANALYSIS ON U.S. ANTITRUST (2008). Yoo (2019). For a defense of the Chicago School vis-à-vis the Post-Chicago School challenge, *see* Joshua D. Wright, *Overshot the Mark? A Simple explanation of the Chicago School's influence on antitrust* Competition Policy Int'l (Dec. 15, 2023).

[10] Lancieri, Posner, & Zingales, *supra* note 6; Jay L. Levine and Porter Wright, *1990s to the present: The Chicago School and Antitrust Enforcement*, ANTITRUST LAW SOURCE (June 1, 2021), https://www.antitrustlawsource.com/2021/06/1990s-to-the-present-the-chicago-school-and-antitrust-enforcement/.

[11] Michael Kades, *The State of U.S. Federal Antitrust Enforcement* (Equitable Growth, Working Paper, 2019); Thomas Philippon, *The Economics and Politics of Market Concentration* (Nat'l Bureau of Econ. Rsch Reporter, December 2019), https://www.nber.org/reporter/2019number4/economics-and-politics-market-concentration; *Too Much of a Good Thing* (The Economist, Mar. 26, 2016), https://www.economist.com/briefing/2016/03/26/too-much-of-a-good-thing?ppccampaignID=19495686130&ppcadID=&gad_source=1&gclsrc=ds.

workers. More radical proponents include also broader societal issues such as environmental sustainability and social justice. The Neo-Brandeisians have yet to make concrete inroads towards that agenda, as the courts and Congress have so far resisted radical change.[12] Nevertheless, the Neo-Brandeisians have revived the debate on whether antitrust in the US has been too lax.

The enduring nature of this debate within policy and academic spheres is perplexing. Antitrust, being a prominently observed and extensively scrutinized domain, boasts a wealth of high-quality data spanning several decades, for example on mergers, concentration ratios, and fines for antitrust violations. All sides in this debate seem to display a predisposition towards data-driven methodologies. Numerous studies, employing diverse methodologies, have diligently probed the question.[13] Nevertheless, the unresolved nature of the inquiry persists, and no consensus is reached on whether antitrust enforcement has been too permissive of anticompetitive behavior, contributing to a decline in consumer welfare.

The problem is that using the data to answer this question is not as straightforward as one may assume. Simply counting mergers, litigation rates or market concentration changes overtime, as is often done, provides little guidance. It is not the case that more blocked or investigated mergers unequivocally means more effective antitrust. Mergers can just as well be pro-competitive, enabling efficiencies that benefit consumers, as they can be anti-competitive, leading to greater market power, higher prices and less innovation. And importantly, it is hard in any given instance to ascertain which is the case. While many studies show that mergers have led to competitive harm,[14] others show that mergers frequently advance pro-

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[12] Tmothy J. Muris, *Neo-Brandeisian Antitrust: Repeating History's Mistakes American Enterprise Institute* (American Enterprise Institute, 2023), https://www.aei.org/wp-content/uploads/2023/06/Neo-Brandeisian-Antitrust-Repeating-Historys-Mistakes.pdf?x91208.

[13] For recent examples *see* Vivek Bhattacharya, Gaston Illanes, & David Stillerman, *Merger Effects and Antitrust Enforcement: Evidence from Us Consumer Packaged Goods* (Nat'l Bureau of Econ. Rsch, Working Paper No. w31123, 2023); Kades, *supra* note 11.

[14] JOHN KWOKA, MERGERS, MERGER CONTROL, AND REMEDIES: A RETROSPECTIVE ANALYSIS OF U.S. POLICY (2014); Nancy L. Rose & Jonathan Sallet, *The Dichotomous Treatment of Efficiencies in Horizontal Mergers: Too Much? Too Little? Getting It Right*, 168 U. PA. L. REV. (2019); Fiona Scott Morton, *Modern U.S. Antitrust Theory and Evidence Amid Rising Concerns of Market Power and Its Effects* (Equitable Growth, Working Paper, 2019).

competitive business objectives,[15] while others find mixed results, for example prices increase in some mergers and decrease in others.[16]

The following examples illustrate the challenge of extracting a definitive answer from the data. If the fourth and fifth largest firms in an industry merge, does this decrease competition or is the new merged firm now better able to challenge the three dominant firms? Do reduced litigation rates indicate less combative antitrust agencies or that many potential mergers have been dissuaded by more aggressive agencies? If an agency has high rates of challenged mergers, but accepts minimal divestiture as remedies, is this active antitrust or "cheap consent?"[17] Because many merger retrospective studies focus on controversial marginal cases, and not on a random sample of all cleared cases, results tend to be mixed with some finding higher prices and others lower prices, revealing little about the agency's average effort.[18] A merger that increases prices slightly, yet results in a large improvement in quality, may leave consumers better off. Yet most merger studies do not account for quality. Similarly, most studies estimate short-term effects, but often the effects on competition can take many years to materialize.[19]

Increasingly there are rigorous econometric studies that leverage some external variation to achieve clean identification of causal effects applied to antitrust questions. While such studies can bring greater certitude to causal claims, they often need to focus on very special contexts that cover only a thin slice of the market in an effort to achieve internal consistency. Although the results have higher causal credibility, they often have little external validity for the greater debate on whether enforcement has been lax.

The point is not to negate the significance of empirical investigation of antitrust enforcement, rather to underscore the need for additional ways to address the

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[15] *See, e.g.,* survey in Maureen K Ohlhausen and Taylor M Owings, *Evidence of Efficiencies in Consummated Mergers* (US Chamber of Commerce, June 1, 2023), https://www.uschamber.com/assets/documents/20230601-Merger-Efficiencies-White-Paper.pdf; John W. Mayo & Mark Whitener, *Has Merger Enforcement Really Gone Soft? Probing the Foundations of the Antitrust Reform Narrative Courting Antitrust: Cover Stories*, 37 ANTITRUST 4 (2022).

[16] Bhattacharya, Illanes and Stillerman, *supra* note 13.

[17] Timothy J. Muris, *Facts Trump Politics: The Complexities of Comparing Merger Enforcement over Time and between Agencies Cover Stories*, 22 ANTITRUST 37 (2007).

[18] Graeme Hunter, Gregory K. Leonard & G. Steven Olley, *Merger Retrospective Studies: A Review Cover Stories*, 23 ANTITRUST 34 (2008).

[19] For detailed discussion on the difficulty of evaluating antitrust policy through data, *see* Gregory J. Werden, *Inconvenient truths on merger retrospective studies*, 3.2 J. ANTITRUST ENFORCEMENT 287–301 (2015); Dennis W. Carlton, *Why We Need to Measure the Effect of Merger Policy and How to Do it* (Nat'l Bureau of Econ. Rsch, Working Paper No. w14719, 2009); Hunter, Leonard, & Olley, *supra* note 18; Murris, *supra* note 17.

inherent ambiguity of the problem. The solution to the indeterminacy of empirical studies is even more data and better studies. Given the prevailing state of deeply entrenched and polarized attitudes towards antitrust, however, it is unlikely that the disagreements can be resolved simply through data-based approaches. In this paper I seek to contribute to this debate by proposing a novel method that uses text-based data to quantify beliefs and attitudes towards antitrust policy.

The antitrust community, including regulators, judges, lawyers, legislators, journalists, academics, firms, consumers, observers, and many others, produce a massive amount of data, analysis, and opinions on a daily basis, that is mostly in the form of text. The sheer volume of this data makes it hard to use for academic or other analyses, except very selectively. Increasingly, text-based methods that leverage natural language processing (NLP) have been used to explore this type of data in a variety of quantitative ways.[20] Various papers specifically related to antitrust have explored different corpora and different NLP methods. Schrepel uses speeches and public statements by antitrust authorities in the US and in Europe to analyze the impact of populist rhetoric on antitrust law and its enforcement and also to quantify the evolving nature of antitrust discourse.[21] Cao applies a dictionary-based analysis to US federal district court decisions to show the rise of economic reasoning over time, especially since the late 1970s with the rise of Chicago School influence on antitrust.[22] Ash, Chen, and Naidu similarly use text-processing techniques to analyze US Circuit Court decisions and district Court sentencing decisions to create a measure of judges' use of economic reasoning and show how this was affected by attendance at the Manne Economics Institute course for federal judges.[23] Juhász et al. use text-based approaches to analyze industrial policy descriptions,[24] and Calomiris, Mamaysky, and Yang analyze text of corporate earning calls to estimate the impact of regulation.[25]

In this paper, I am interested in measuring the evolution of beliefs and attitudes towards antitrust enforcement through the analysis of different manifestations by practitioners and observers in the form of text and speech. I use a machine learning

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[20] Matthew Gentzkow, Bryan Kelly & Matt Taddy, *Text as Data*, 57 J. ECON. LIT. 535 (2019).

[21] Thibault Schrepel, *Antitrust Without Romance*, 13 NYUJL & LIBERTY 326 (2019).

[22] Siying Cao, *Economic Analysis in Antitrust Law: An Automated Approach Applied to US Appellate Courts*, 2 STAN. COMPUTATIONAL ANTITRUST 155 (2022).

[23] Eliott Ash, Daniel L. Chen, & Suresh Naidu, *Ideas have consequences: The impact of law and economics on American justice* (Nat'l Bureau of Econ. Rsch, Working Paper No. w29788, 2022).

[24] Réka Juhász et al., *The Who, What, When, and How of Industrial Policy: A Text-Based Approach* (Center for Open Science, 2022).

[25] Charles W. Calomiris, Harry Mamaysky, & Ruoke Yang *Measuring the cost of regulation: A text-based approach* (Nat'l Bureau of Econ. Rsch, Working Paper No. w26856).

classifier that categorizes any text according to its greater compatibility to Chicago School precepts or to a Neo-Brandeisian position. A Chicago School position typically believes in minimal government intervention in markets, arguing that market forces naturally correct monopolistic behaviors and that consumer welfare, primarily measured through price and output, is the main criterion for antitrust policy. In contrast, a Neo-Brandeisian position advocates for more aggressive antitrust enforcement, emphasizing the dangers of concentrated economic power beyond just consumer prices, such as its impact on democracy, worker rights, and small businesses, and advocates for a return to the broader antitrust principles championed by Louis Brandeis.

The algorithm operates on the premise that it can assign any text a value between 0 and 1, reflecting its alignment with either end of a spectrum: Chicago School or Neo-Brandeisian thought. Higher scores suggest a closer alignment with Neo-Brandeisian views. The algorithm was trained on a diverse corpus of materials, including blog posts, scholarly articles, opinion editorials, and columns, each distinctly embodying either Chicago School or Neo-Brandeisian perspectives. Given the stark divide in antitrust perspectives in recent decades, assembling two antipodal text collections was straightforward. The Chicago School collection comprises 267 texts, matched by 253 in the Neo-Brandeisian set.

I then proceed to use this algorithm to classify a variety of antitrust corpora, each of which captures the beliefs and attitudes of a different set of actors from the antitrust community. I focus on texts that are uniform in terms of comparability of source and that cover a long span of time so as to reveal how attitudes have evolved. The first corpus is the full set of blog posts in the Blog o' Blogs series curated by the Competition Policy International (CPI) website. The series of blog posts is curated from the wider set of blog posts on the internet by the CPI, covering many different sources, outlooks, and themes within antitrust. Because the series is curated by CPI and not randomly drawn from the web, I assume that it is comparable over time. There are 1754 blog posts from 2010 to 2023 and I take the changes over time to reflect the general *zeitgeist* of antitrust, that is, how the attitudes of the antitrust community on average have evolved. I compare this average to subsets of conspicuously Chicago School and Neo-Brandeisian blogs to give a notion of variability across the average sentiment.

The second corpora I explore is the series of 1077 official blog posts by the FTC, started in 2010.[26] These posts are a vehicle through which the agency talks to and makes announcements to consumers, the general business community, and other interested parties. Most of the posts are classified under the *Business Blog* title, but there are also other less frequent series called *Competition Matters*, *Technology Blog* and *Data Spotlight*. Results show a stable average sentiment of the full sample over time. However, the decomposed results show a greater Chicago School affinity of the *Competition Matters* series, except for a sharp turn in 2023 which is the year when Neo-Brandeisian leadership of the FTC truly came into force. This suggests that while the other series serve to announce prosaic day-to-day business, the *Competition Matters* comprises more ideological themes.

The next step is the investigation of the sentiment of speeches by FTC commissioners and by DOJ antitrust authorities. There are 1656 speeches from 1915 to 2023, spanning the full FTC history.[27] DOJ speeches are mostly given by the Assistant Attorney General for antitrust, but sometimes also by high-ranking deputies and advisors. There were 632 speeches from 1938 to 2023. Speeches are particularly revealing material for the purposes of this paper. Most speeches were given at external events, conferences, gatherings, and hearings, rather than as part of the agencies' regular schedule. As such they serve as platforms where the speakers can tout their achievements, pound their chests, take stabs at adversaries, and test intentions on select groups. In both cases the results clearly show the arc of antitrust, with Brandeisian/Neo-Brandeisian sentiment dipping in the late seventies to early naughts, but moving back upwards in recent years. I also use the index to classify some prominent FTC commissioners and DOJ Assistant Attorneys according to the Chicago School Neo-Brandeisian sentiment of their speeches.

The final corpus I analyze is a set of important US antitrust legislation, starting with the Sherman Act of 1890, the Clayton Act of 1914, the Robinson-Patman Act of 1936, the Celler–Kefauver Act of 1950 and nine different versions of the Merger Guidelines starting in 1968, including the latest 2023 draft Merger Guidelines proposed by the new Neo-Brandeisian leadership. Once again, the results exhibit a clear arc of antitrust.

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[26] Fed. Trade Comm'n., Blog Posts, https://www.ftc.gov/about-ftc/bureaus-offices/blog-posts?page=0 (last visited July 8, 2024).

[27] Fed. Trade Comm'n., Speeches, https://www.ftc.gov/news-events/news/speeches (last visited July 8, 2024).

In the last section, I show how the index presented in this paper can be used to empirically address broader questions in the antitrust literature. One such question is 'who controls the bureaucracy?' The literature has put forth at least five different answers: (i) Congress,[28] (ii) the President,[29] (iii) courts and judges,[30] (iv) the bureaucrats themselves, protected by insulating legislation or by principal-agent information asymmetries,[31] and (v) multiple-principals simultaneously.[32]

The exercise I perform is based on the influential paper by Weingast and Moran (1983) that defended the congressional dominance hypothesis, that is, the view that congressional principals (usually the overseeing committee or subcommittee) detain a series of instruments and prerogatives, such as annual appropriations, nomination confirmation, and power of investigation, to effectively control agency behavior even without the need for constant surveillance. They tested this theory through an event study based on the FTC's drastic about-face in the early 1980's, from highly interventionist to much more hands-off antitrust enforcement. They showed that the pivot was not likely a change in beliefs by the agency, but rather due to a change in the composition of the oversight subcommittee in the Senate from Democratic to Republican majority. Using the same ADA (Americans for Democratic Action) data as a proxy for legislator ideology, I extend the analysis to subsequent congressional legislatures up to the present day, which includes eight changes in partisan majority of the Senate Judiciary Committee and the Subcommittee on Competition Policy, Antitrust and Consumer Rights. I show that when the committees change from Democratic to Republican majority, the average speech of FTC commissioners shifts downwards (more Chicago School) in the following three years. When the committees shift from a Republican to a Democratic majority, there is no statistically significant change in antitrust attitude in FTC speeches. I close this section with some speculation on why there may be such an asymmetry.

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[28] Barry R. Weingast & Mark J. Moran, *Bureaucratic discretion or Congressional Control? Regulatory policymaking by the Federal Trade Commission*, 91 J. POL. ECON. 765–800 (1983).

[29] Terry M. Moe & William G. Howell, *The presidential power of unilateral action*, 15 J. L., ECON., & ORG. 132 (1999).

[30] Pablo Spiller & Rafael Gely, *Strategic Judicial Decision-Making, in* THE OXFORD HANDBOOK OF LAW AND POLITICS, 34-35 (2009).

[31] James Q. Wilson, Bureaucracy: What government agencies do and why they do it (Hachette UK, 1989); Thomas W. Gilligan & Keith Krehbiel, *Collective decisionmaking and standing committees: An informational rationale for restrictive amendment procedures*, 3 J. L., ECON., & ORG. 287 (1987).

[32] Thomas H. Hammond & Jack H. Knott, *Who controls the bureaucracy?: Presidential power, congressional dominance, legal constraints, and bureaucratic autonomy in a model of multi-institutional policy-making*, 12 The Journal of Law, Economics, and Organization 119 (1996); Eric Alston et al., *Bureaucracies, in* INSTITUTIONAL AND ORGANIZATIONAL ANALYSIS: CONCEPTS AND APPLICATIONS (2018).

In the next section I show the results of a topic modeling exercise performed on each of the three main corpora used in this paper (Blogs, FTC speeches and DOJ speeches). This serves as descriptive statistics of the data and shows which themes each set of texts focused on in different periods and how these evolved over time.

II. The Evolution and Co-occurrence of Topics in Antitrust Texts

Topic modeling is a powerful technique in natural language programming that identifies a specified number of topics within a collection of documents by analyzing patterns of word frequencies and co-occurrences.[33] In this paper I use Latent Dirichlet allocation[34] to perform topic modeling on the collection of blogs in the Blog o' Blog series (1754 documents from 2010-2023) on the set of FTC commissioner's speeches post 1995 (817 documents) and on the collection of DOJ antitrust speeches after 1995 (526 documents).[35] Each of these collections are primarily concerned with antitrust, but have different interests and outlooks related to the roles they play in antitrust policy. Each of the collections comes from a consistent source over time (including the blog series, as I argued above) rather than being a random draw of the full set of documents written on antitrust. This allows us to compare the emphasis across topics and variation over time.

The output from the topic modeling algorithm consists of a list of words that represent the key themes or concepts within each identified topic, ranked by their relevance or frequency within the topic. The list of words for each of the three topics is presented in appendix A. The algorithm does not tell us what the topic is. This must be done by the analysts, using their knowledge of the general subject. Given that large language models are particularly good at finding and classifying patterns I used Chat GPT-4 to identify and name each of the topics, double checking carefully for hallucinations and misinterpretations.

In addition, I asked it to give the same name to topics across collections if they were sufficiently similar. It found three topics that were shared across collections (i) Merger and Acquisition Enforcement, (ii) Competition and Antitrust Law, and (iii)

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[33] Topic modeling is a powerful technique in natural language processing that identifies a preselected number of topics in a corpus by grouping frequently co-occurring words. Each document is then represented as a distribution of these topics, with each topic assigned a weight or load factor.

[34] David M. Blei, Andrew Y. Ng, & Michael I. Jordan, *Latent Dirichlet Allocation*, 3 J. Machine Learning Rsch. 993 (2003).

[35] The DOJ and FTC series are truncated at 1995 because previous years often have too few speeches for a meaningful average.

Technology and Data Privacy (shared by Blogs and DOJ). The full list of topics and their evolution over time for each collection is shown in Figure I, II and III.

The figures can be explored individually over time to see which topics were given more attention by each set of players (blogs, FTC or DOJ). Figure I, for example, shows that since 2019 the blog corpus has given more attention to themes heavily loaded on the topics "Market Dynamics", "Technology and Data Privacy", and "FCC Regulation", and less to those that focus on "Antitrust Impact on Employment", and "Pharmaceutical Industry Regulation." Similarly, Figure II shows that up until 2005 the FTC speech corpus put great weight on the topic "Efficiency in Competitive Markets" but has since reduced that emphasis, turning instead to the topics "Mobile Device Security" from 2009 to 2017 and "Technology and Data Privacy" since 2014. Figure 3 shows a period of interest by the DOJ from 1997 to 2008 on "International Cartel Investigations", and an increasing focus on the topic "DOJ Work and Attorney General Cases" since 2012, indicating perhaps a greater personalization of the role of the Assistant Attorney Generals for Antitrust.

An alternative approach to interpreting topic modeling results is through topic networks, which visualize connections between topics frequently co-occurring within the same documents.[36] This is achieved by converting the two-mode matrix (document-topic) into a one-mode matrix (topic-topic), leveraging cosine similarity to quantify topic distribution similarity across documents. The similarity scores range from 0 (no similarity) to 1 (perfect similarity). In the network, topics are connected if their similarity exceeds 0.15, revealing the intricate web of relationships and thematic overlaps in the document corpus. Figures IV, V, and VI show the networks for the blogs, FTC speeches and DOJ speeches, respectively. The size of the nodes are proportional to the eigenvector centrality of each topic, which represents their influence within the network. Central nodes are those that connect intensively within the network, indicating topics that are not only prevalent across documents but also serve as crucial links, bridging diverse topics and fostering a cohesive thematic structure in the corpus. One interesting result is that while market participants and observers, as reflected in the blogs, focus predominantly on "Market Dynamics" and "FCC Regulation," the regulatory agencies display a different set of priorities. Specifically, the FTC shows a heightened interest in "Public Perceptions of Government," and the DOJ appears to concentrate on "DOJ Attorney General Cases." This distinction suggests that the agencies are not just focused on regulatory actions

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[36] Martin Gerlach, Tiago Peixoto, & Eduardo Altmann, *A Network Approach to Topic Models* 4(7) SCIENCE ADVANCES (2018).

and policies but are also keenly attentive to how their activities and performance are received and endorsed by the market and the public at large.

The network visualizations reveal a prominent emphasis on economic analysis in the discourse of both the FTC and DOJ. Specifically, the DOJ's network positions "Economic Analysis" as a central node, underscoring its significance in their communications. Similarly, the FTC network prominently features "Efficiency in Markets," reflecting a shared focus on economic principles. This prominence likely mirrors the Chicago School influence during the era most represented in the speech corpora of both agencies. Contrarily, the blogs do not prominently feature a corresponding topic, indicating a divergence in thematic focus from the agencies. Nonetheless, all three sources—the blogs, FTC, and DOJ—consistently highlight the legal dimensions of antitrust, as evidenced by the substantial emphasis on the "Competition & Antitrust Law" topic across the networks.
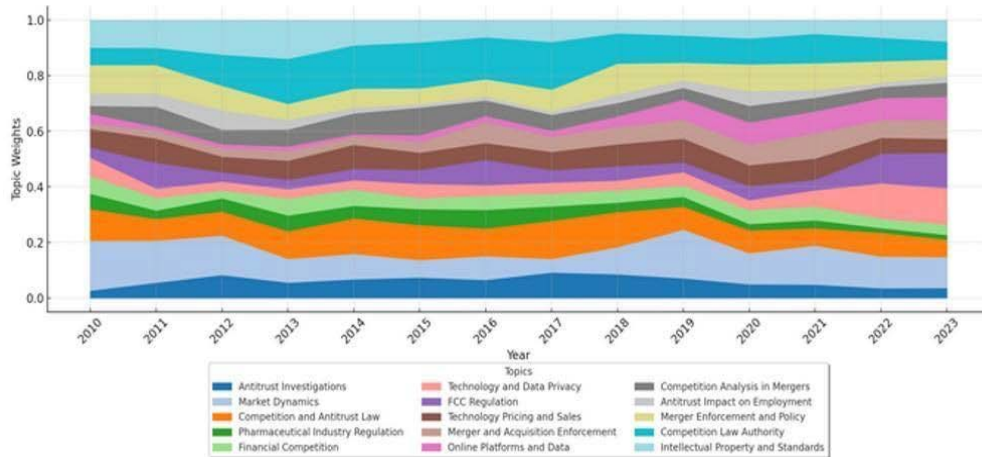

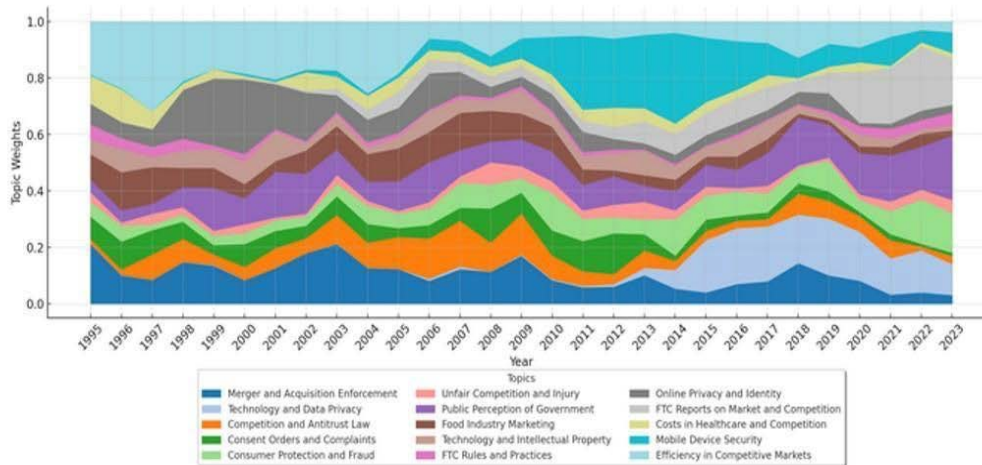**Figure I**: Topic evolution in Blog 'o Blogs corpus 2010-2023
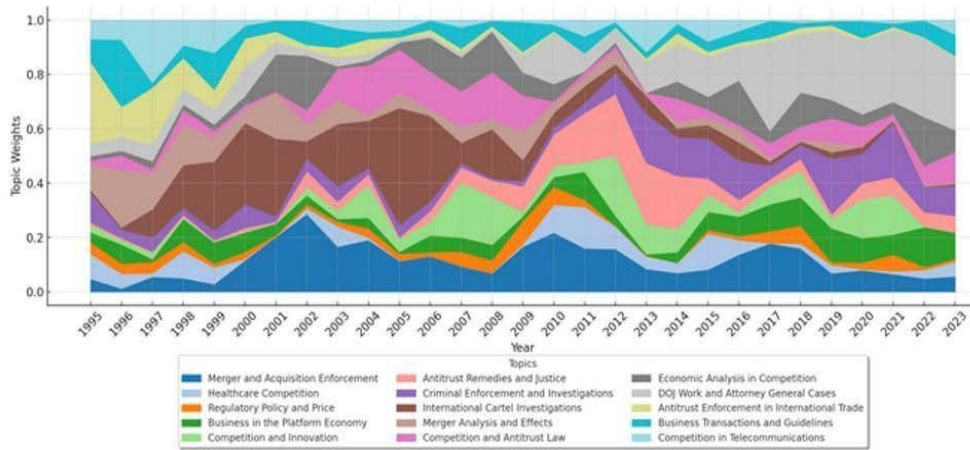

Figure II: Topic evolution in FTC speeches 1995-2023
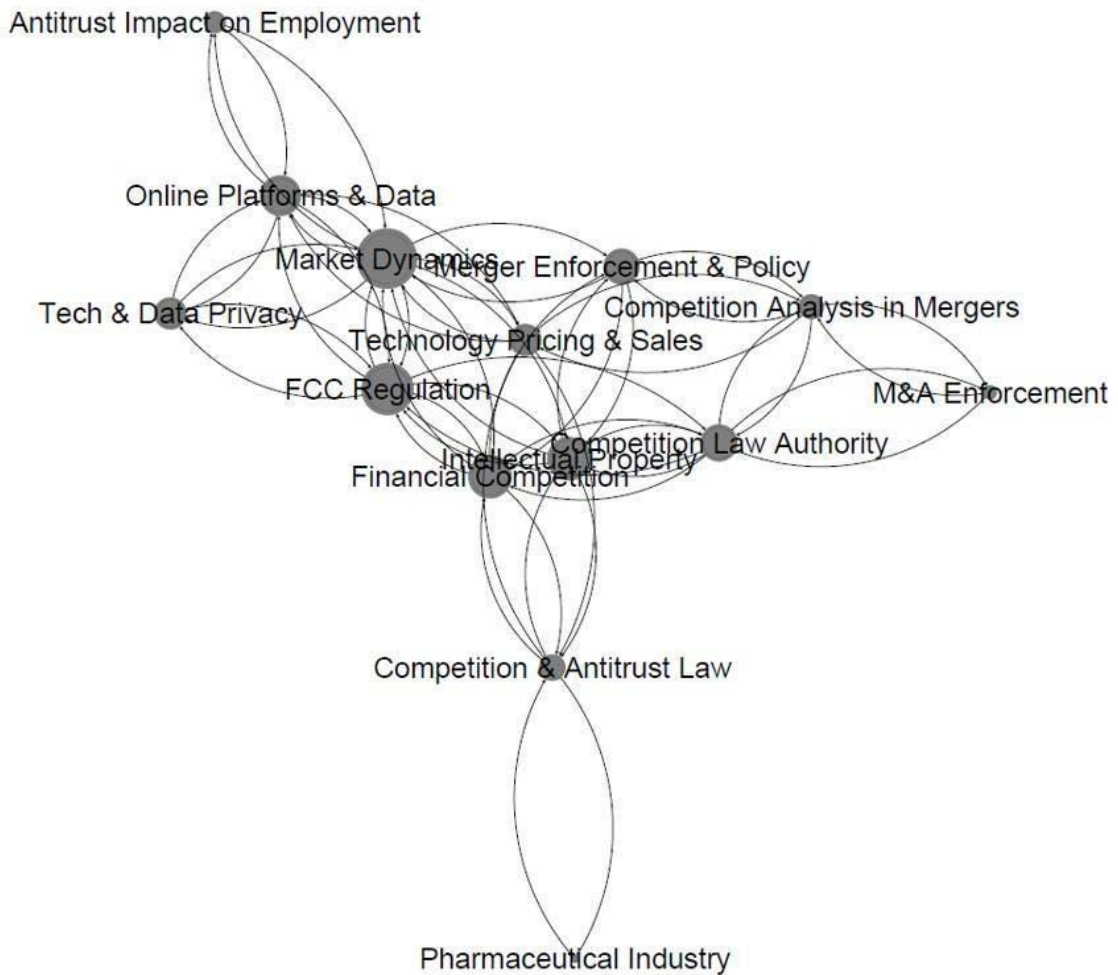
Figure III: Topic evolution in DOJ speeches 1995-2023

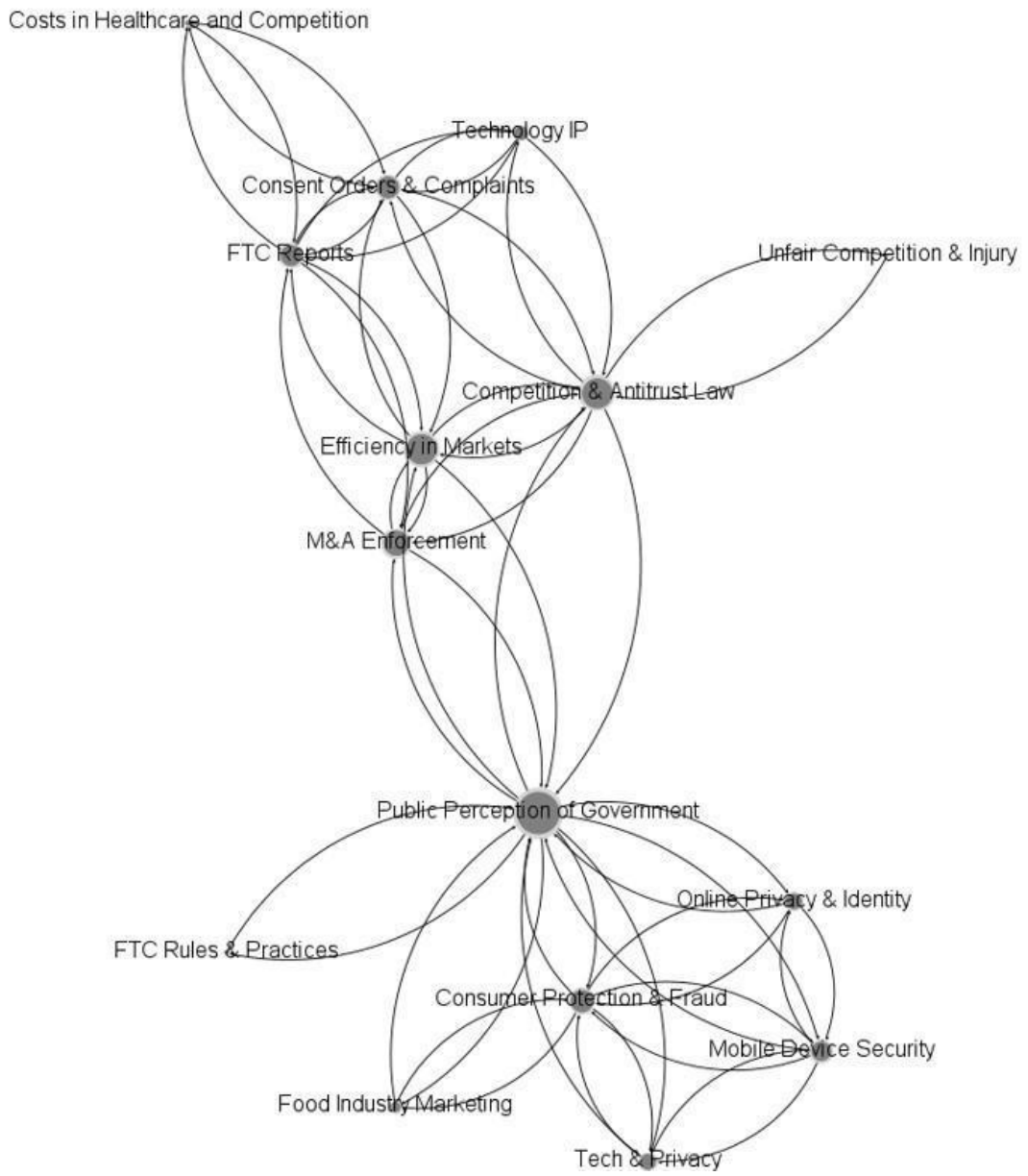**Figure IV**: Topic network in Blog 'o Blogs corpus 2010-2023

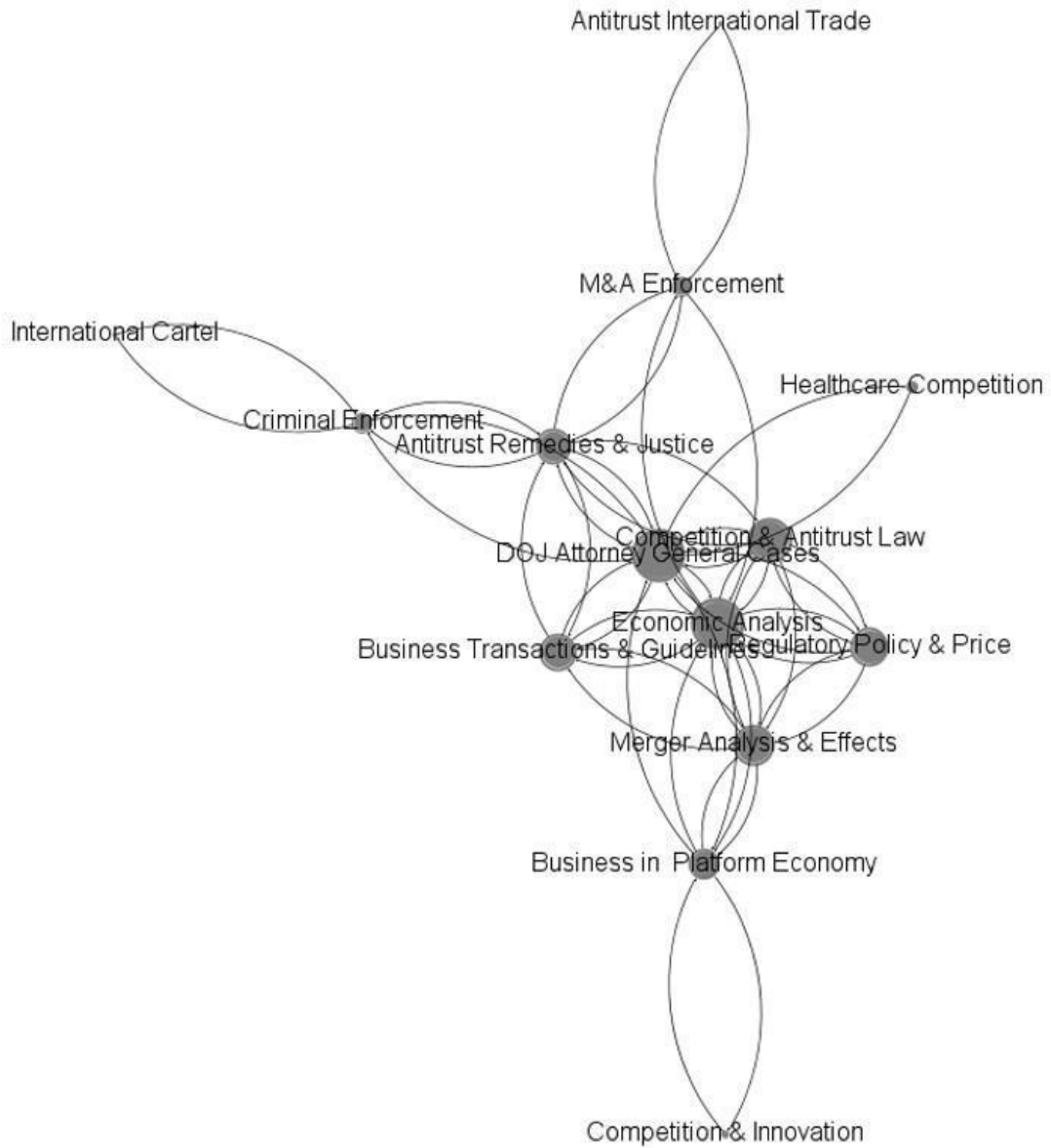**Figure V**: Topic network in FTC speeches 1995-2023

Figure VI: Topic network in DOJ speeches 1995-2023

III. The Evolution of Antitrust Sentiment in the Blogosphere

The main contribution of this paper is to develop and employ a machine learning algorithm to classify documents based on their alignment with either Chicago School or Neo-Brandeisian perspectives on antitrust. The training dataset was curated by hand and comprises 253 distinctly Neo-Brandeisian documents and 267 unmistakably Chicago School-oriented documents. The strong polarization that has for some time pervaded the antitrust community facilitated the task of finding

extreme manifestations on this topic in the form of blog posts, articles, columns, editorials, and academic writings.[37]

The procedure begins by preprocessing the text, which involves converting to lowercase, removing punctuation and numbers, tokenizing, filtering out stopwords, and lemmatizing. I then vectorize the processed text using TF-IDF (Term Frequency-Inverse Document Frequency), a statistical measure used to evaluate the importance of a word in a document relative to a collection of documents. The vectorized text is split into training and validation sets, which are used to train a logistic regression classifier, which is well-suited for binary classification tasks such as this.

The classifier's performance is assessed using a validation set, and the results are reported to ensure model accuracy and reliability. The algorithm demonstrated high precision post-training, accurately categorizing 84% of Chicago School and 83% of Neo-Brandeisian texts. It also showed high recall, successfully identifying 81% of texts from the Chicago School set and 85% from the Neo-Brandeisian set.

Finally, I preprocessed the corpora of interest, predicted sentiment probabilities using the trained model, and outputted the results. The probabilities indicate the likelihood of each document in the corpus aligning with Neo-Brandeisian thinking, thereby offering a quantitative measure of ideological leanings across different text corpora. This machine learning approach enables a nuanced, data-driven analysis of antitrust discourse, reflecting the prevailing ideological trends and their evolution over time.

The first dataset subject to analysis consists of 1,754 blog posts compiled within the "Blog o'Blogs" series, a collection curated by CPI.[38] These blog posts span the period from January 2010 to October 2023 and encompass a range of themes and topics directly related to antitrust. The selection exhibits a diversity of perspectives and viewpoints, seemingly crafted with an aim to ensure impartiality. While it is plausible that the CPI's selection process may introduce some degree of bias, for the purposes of this analysis it is only necessary that any such bias remains relatively consistent throughout the period under examination.

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[37] In appendix B I give some examples of documents classified as Chicago School and Neo-Brandeisian in the training set.

[38] Blog o'Blogs, Competition Pol'y Int'l, https://www.pymnts.com/cpi/cpi-blog/.

Figure VII shows the evolution of the average for each year of the estimated value of all blogs. Higher values indicate a more Neo-Brandeisian position. For the sake of comparison, consider that the Neo-Brandeisian "manifesto" by Lina Khan, "Amazon's Antitrust Paradox,"[39] was classified with a score of 0.544. Meanwhile, a paper by Robert Bork, the founding father of the Chicago School approach, "The Role of Courts in Applying Economics," achieved a value of 0.312.[40]

The results in Figure VII show the evolving *zeitgeist* surrounding antitrust in the United States, given the extensive range of perspectives and beliefs encapsulated within the dataset of blog posts. The most noteworthy observation within this analysis is the discernible upswing in sentiment favoring heightened antitrust stringency, commencing in 2013. This time frame coincides with the emergence of Neo-Brandeisianism as a movement and includes the period of ascendancy of its representatives within antitrust agencies, thereby signifying a notable shift in the prevailing *zeitgeist* toward a more proactive and interventionist approach to antitrust enforcement.
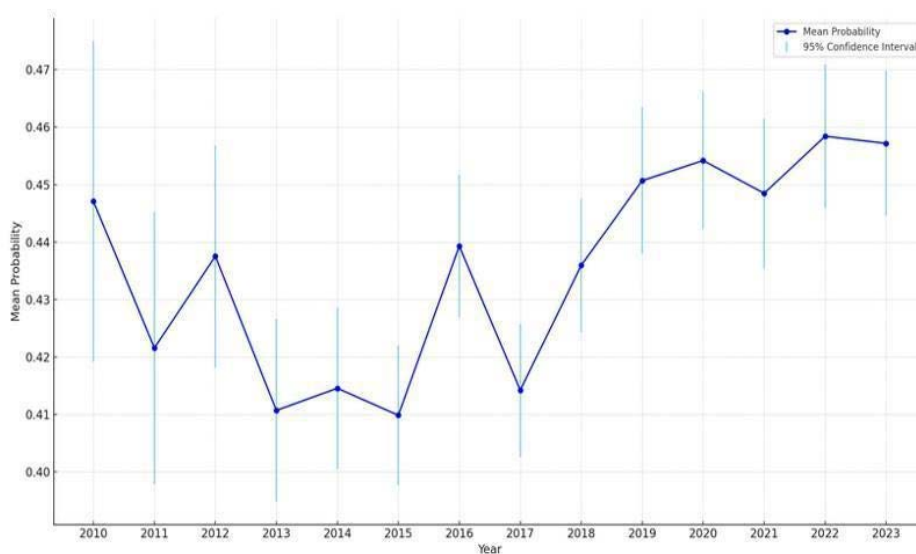
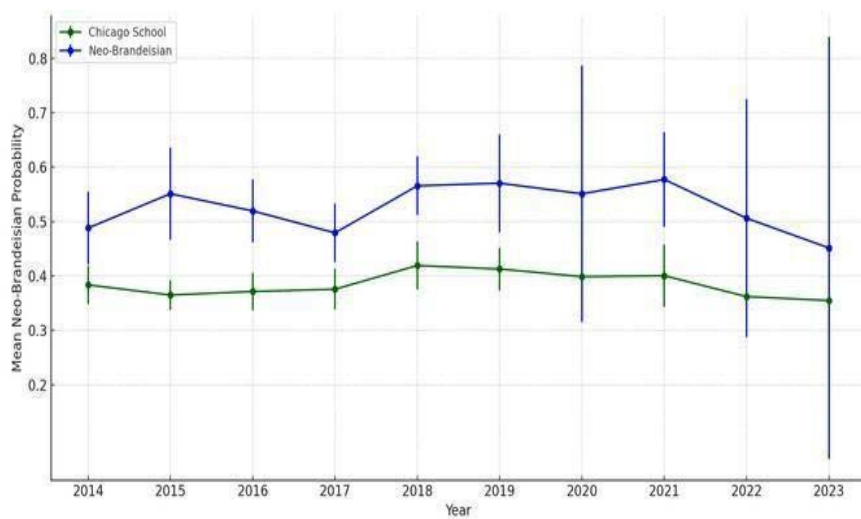**Figure VII:** Evolution of antitrust sentiment in CPI-curated blogs.
Data: https://www.pymnts.com/cpi/cpi-blog/

While the average value of the antitrust sentiment index I have computed provides a broad overview of the prevailing sentiment regarding antitrust policy, it is useful to examine the variation within the entire dataset. To achieve this, I present in

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[39] Lina M. Khan, *Amazon's Antitrust Paradox*, 126 YALE L. J 712 (2017).

[40] Robert H. Bork, *The Role of the Courts in Applying Economics*, 54 ANTITRUST L. J. 21 (1985). Bork's classic book, ROBERT H. BORK, THE ANTITRUST PARADOX (1978) was not used because I could not find a digital version.

Figure 8 two distinct series: one derived from a selection of unapologetically Chicago School-oriented blogs and the other from a collection of clearly Neo-Brandeisian blogs.[41] These results underscore that these more polar blogs indeed convey differing tones and attitudes toward antitrust matters. Additionally, the findings indicate that the overall increase in the index, as depicted in Figure VII, is not predominantly influenced by these more extreme blogs. Both series exhibit declines since 2021, a period during which the general average sentiment increased. This observation implies that a larger number of moderately oriented blogs must have shifted their perspectives upward during this timeframe.

Figure VIII: Antitrust sentiment in Chicago School versus Neo-Brandeisian Blogs.
The Chicago School blogs used are: Truth on the Market, Chillin' Competition, What Am I Missing, and Josh Wright.
The Neo-Brandeisian blogs are: Cartel Capers, Big, and Open Markets Institute.

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[41] For a list on the Chicago School blogs used, see Truth on the Market, https://truthonthemarket.com/ Chillin' Competition, https://chillingcompetition.com/; Antitrust, What am I missing?, https://zephyranth.pw/category/antitrust/;. Joshua D. Wright, a leading scholar in law and economics, also writes Chicago School-oriented blog posts in some of the listed blogs. For a list on the Neo-Brandeisian blogs, *see* Robert Connolly, Cartel Capers, https://cartelcapers.com/;, Matt Stoller, BIG, https://www.thebignewsletter.com/; Open Markets Institute, https://www.openmarketsinstitute.org/.

IV. The Evolution of Antitrust Sentiment in the FTC

While the previous section used varied blog series to capture the broader sentiment surrounding antitrust, this section narrows the focus to a specific blog series hosted on the Federal Trade Commission's homepage.[42] This blog serves as an official channel of communication for the FTC, so the posts contained therein offer insights into the agency's formal stance on antitrust policy. Spanning the period from September 2010 to October 2023, this series comprises a total of 1,077 posts. The majority of these posts fall under the category of "Business Blog" (comprising 85% of the total), with the remaining posts categorized as "Competition Matters" (11%), "Data Spotlight" (2%), and "Technology Blog" (1%).

When subjecting the entire dataset to my classification algorithm, the annual average Neo-Brandeisian probability remains relatively constant over time, suggesting a stable orientation throughout the period. However, a more nuanced picture emerges when the "Business Blog" posts are disaggregated from the "Competition Matters" posts (along with the other smaller series). As depicted in Figure IX, the "Business Blog" series maintains a steady level of sentiment throughout the period, displaying a predisposition towards a more active FTC policy. In contrast, the "Competition Matters" series exhibits a distinct pattern: it initially adopts a less interventionist stance until 2019, followed by a notable upsurge in subsequent years that coincides with the appointment of Neo-Brandeisian leadership within the FTC. Consequently, while the "Business Blog" primarily serves as a platform for routine announcements and standard FTC topics, relatively unaffected by the ideological dimensions under examination, the "Competition Matters" series emerges as a more indicative barometer for gauging beliefs and attitudes pertaining to antitrust policy.

The next corpus I examine offers a deeper understanding of the Federal Trade Commission's (FTC) stance on antitrust matters, as it contains speeches and public pronouncements delivered by the commissioners and select high-ranking officials within the FTC. These addresses are typically delivered on public platforms, including conferences, governmental and private events, and similar occasions, where FTC officials speak in their official capacity before audiences that include market participants, analysts, academics, journalists, and various stakeholders in the realm of antitrust and beyond. Despite the formal nature of these speeches, the often

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[42] Business Blog, Fed. Trade Comm'n, https://www.ftc.gov/business-guidance/blog.

informal and celebratory atmosphere of such occasions frequently prompts the speakers to be candid and forthcoming in their remarks.
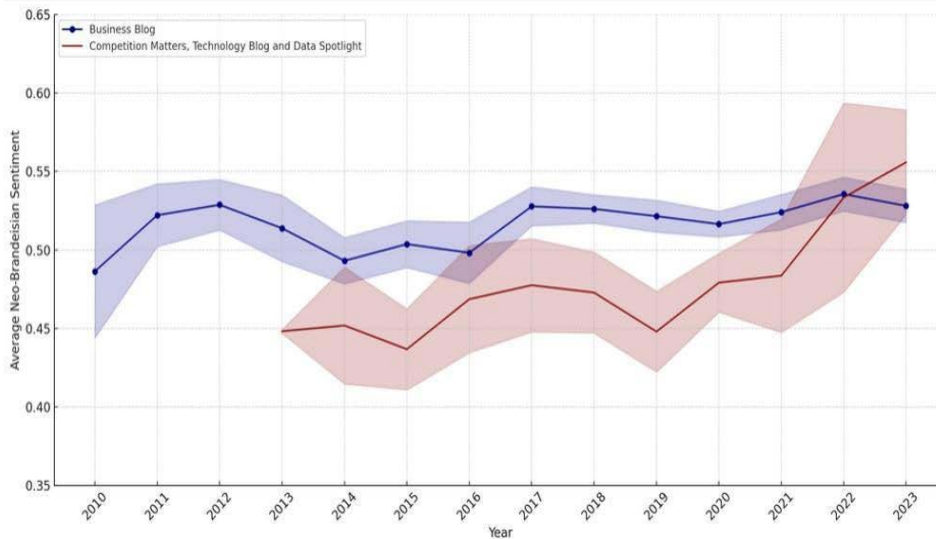

Figure IX: FTC Blog Series
Data: https://www.ftc.gov/business-guidance/blog

This series presents a particularly valuable resource for this study due to its comprehensive coverage of the FTC's history dating back to its establishment in 1914. While the earlier years may contain fewer speeches compared to more recent times, this extensive historical span provides a unique opportunity to examine the evolution of antitrust policies over the FTC's existence. Unlike the preceding series analyzed in this study, which focused solely on the period from 2010 onward, this corpus allows us to more effectively explore the arc of antitrust in the US.

Each point in Figure X represents one speech in the full data set in the FTC's homepage. There are 1656 observations, starting with a speech in 1915 by Joseph Edward Davies, the first chairman of the FTC, to a speech by Lina Khan in November of 2023. For each year there is considerable variation across the sentiment of speeches. This is an artifact of how the Commission was designed, as by law no more than three commissioners can be from the same political party (appointed by the President and confirmed by the Senate).[43] The divergence in political views in thethe

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[43] In appendix C I present a graph that depicts the full composition of the FTC commission since its creation in 1914, including indication of who was the chairman at each point in time. This is a figure extracted from the FTC website, but I have modified it to show the partisan affiliation of each commissioner and which side held a majority in each year.

Commission has not varied over time. The standard deviation of speeches in the same year has been relatively constant from 1995 to the present.[44]
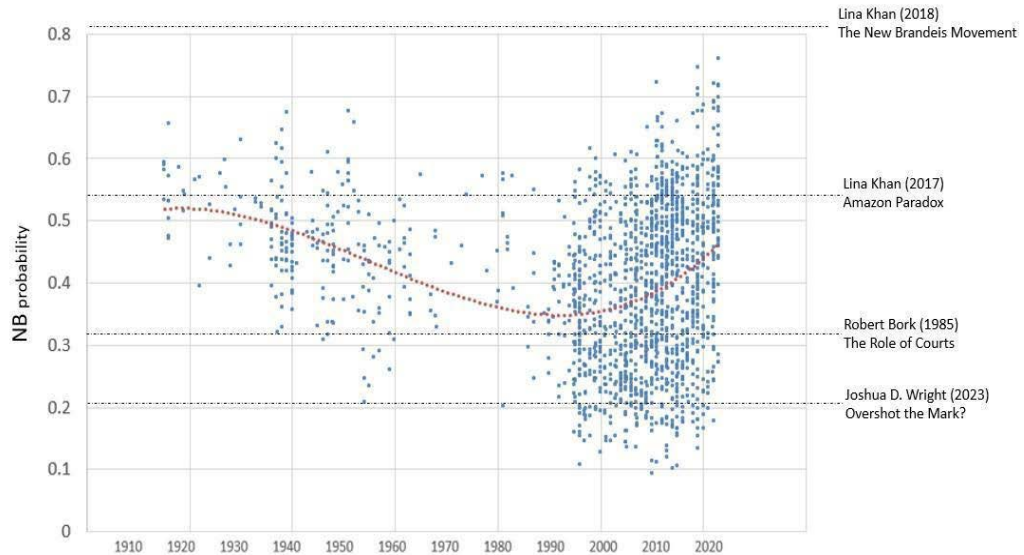
Figure X: Speeches by FTC Leadership, 1915-2023
Data: https://www.ftc.gov/news-events/news/speeches?page=84

The scores produced by running four different landmark antitrust texts through the algorithm are shown in the graph as benchmarks for comparison for the speeches. Lina Khan's "Amazon Antitrust Paradox" has a score of 0.544 and her subsequent piece defining and defending the New Brandeis Movement lies at 0.822.[45] This means she used more Neo-Brandeisian language in the latter. Robert Bork's "The Role of Courts"[46] has a score of 0.312 and *Overshot the Mark?* by Joshua Wright—FTC Commissioner from 2013 to 2015—and one of the most unapologetic Chicago School voices - lies at 0.205.[47]

The red line in Figure X gives an indication of the evolution of the average antitrust attitude of the commission.[48] This line clearly traces the arc of antitrust. Brandeisian thinking - as revealed by the FTC speech corpus - was high when the FTC was created in 1914 and during the time of Judge Brandeis. It started declining as early as the 1950s and 1960s (though the number of speeches per year in the dataset during this period was lower) and reaches its lowest level during the 1980s and 1990s.

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[44] For earlier years there are often fewer speeches, often from a small subset of commissioners, so the standard deviation is smaller but is not representative.

[45] Khan, *supra* note 39.

[46] Bork, *supra* note 40.

[47] Wright, *supra* note 9.

[48] It is fit through a third-degree polynomial to capture the non-linear changes over time.

Since the 2000s (neo) Brandeisian thinking has made a comeback. These results provide a way of quantifying the change in attitudes and beliefs at the Federal Trade Commission since its inception in 1914, revealing not only the average sentiment at any point in time, but also the variation across commissioners and the dynamics of change over time.

Next, I investigate the variation in antitrust sentiments within the speeches delivered by different individuals at the FTC. Figure XI presents the average antitrust score derived from each speaker's speeches, with the horizontal lines representing the duration of their tenure in office, and the color coding indicating their partisan affiliation. Once again, the arc of antitrust is evident. The results provide a quantitative means of ranking important figures in U.S. antitrust history according to the latent attitudes in their speeches. As anticipated, Republican commissioners tend to exhibit a stronger affinity for the Chicago School of thought, while their Democratic counterparts lean more towards Neo-Brandeisian perspectives. This pattern aligns with established expectations. The graph serves as compelling validation for the accuracy of the classification algorithm by consistently positioning well-known proponents of the Chicago School, such as Joshua Wright and Christine S. Wilson, significantly lower on the antitrust score scale. In contrast, it positions prominent Neo-Brandeisians like Lina Khan and Rohit Chopra higher on the same scale, thereby affirming the algorithm's ability to effectively distinguish between these contrasting antitrust orientations among FTC speakers.
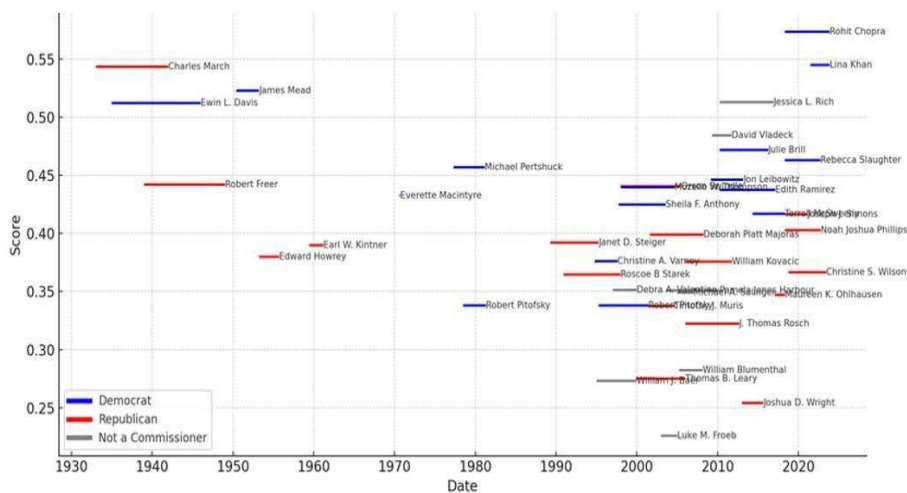
Figure XI: Speeches by FTC Leadership averaged over tenure.
Includes speakers with more than ten speeches in the data set.
Data: https://www.ftc.gov/news-events/news/speeches?page=84

V. The Evolution of Antitrust Sentiment in the DOJ

In the United States, both the Federal Trade Commission (FTC) and the Department of Justice (DOJ) possess extensive jurisdiction over antitrust policy, as mandated by statutory law.[49] However, the two agencies differ in their organizational structure and relationship to the executive branch. The DOJ operates as an integral part of the Executive branch, maintaining a more direct connection to the President and being susceptible to political influences. In contrast, the FTC operates as an independent agency, with its commissioners nominated by the President and confirmed by the Senate.[50] The FTC's unique five-person committee structure, characterized by bipartisan composition and staggered seven-year terms, fosters distinct incentives compared to the DOJ (*see* Appendix C for details). While both agencies share overlapping jurisdiction, conflicts between them are relatively rare.[51]

A recent report from the Government Accountability Office (GAO), commissioned in response to a 2021 House report, underscores that these agencies have established a system for assigning jurisdiction to new cases primarily reliant on expertise and resource constraints. Once clearance for a case is established, it is uncommon for one agency to interfere or comment on the other's ongoing investigations. Nevertheless, occasional conflicts do arise, exemplified by the 2019 case of *FTC v. Qualcomm*, during which the DOJ submitted a brief to the court expressing its disagreement with the FTC's position.[52] The index proposed in this paper could be used to check if conflicts are more likely when the attitudes towards antitrust stringency are more divergent (this is beyond the scope of this paper).

Like the Federal Trade Commission (FTC), the DOJ Antitrust Division provides access to its comprehensive collection of speeches via their official website.[53] This repository encompasses a total of 632 speeches, spanning the years from 1938 to 2023. While the majority of these speeches are delivered by the acting Assistant Attorney General, they also feature contributions from deputies and advisors closely associated with the agency's leadership. Much like the FTC speeches discussed in the preceding section, those delivered by the DOJ are typically presented at public events,

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[49] U.S. Gov't Accountability Off., GAO-23-105790, *DOJ and FTC Overlap, but Conflicts are Infrequent* (2023).

[50] The influence of Executive and Congress over the FTC will be discussed in Section 7.

[51] U.S. Gov't Accountability Off., GAO-23-105790, *DOJ and FTC Overlap, but Conflicts are Infrequent* (2023).

[52] *FTC v. Qualcomm*, 411 F. Supp. 3d 658 (N.D. Cal. 2019).

[53] US Department of Justice, https://www.justice.gov/atr/speeches (last visited May 24, 2024).

offering a platform to engage with various stakeholders, including the press.[54] The speeches serve multifaceted purposes, extending beyond the mere dissemination of information about the DOJ's activities. They also serve as a forum for asserting positions, challenging adversaries, and gauging the receptivity of 7the audience to potential new initiatives. In essence, they represent a platform for articulating agency priorities and engaging in public discourse on antitrust matters.
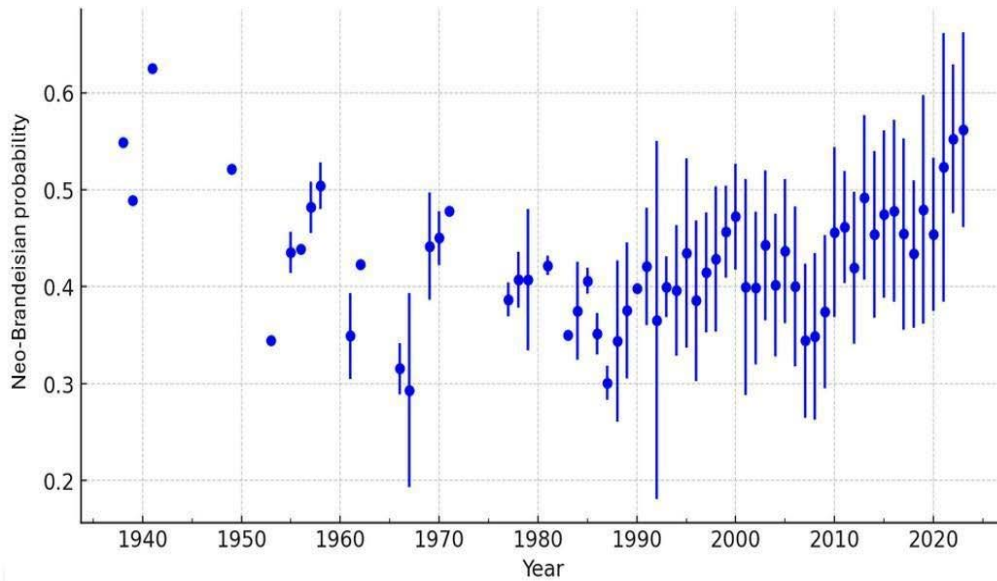

Figure XII: Speeches by DOJ Leadership 1938-2023
95% confidence intervals
Data: https://www.justice.gov/atr/speeches

Figure XII presents the antitrust stringency index for all DOJ speeches. In this case, it was not necessary to fit a curve to show the evolution of the average yearly position as the arc of antitrust is even more apparent than in the case of the FTC, especially the rise in the around 2010. A comparison of the DOJ speech data with that of the FTC in Figure X shows a similar trajectory over time, though the FTC speeches have a greater dispersion in any given year with a greater proportion of extreme (Neo-)Brandeisian speeches (above 0.6) and extreme Chicago School speeches (below 0.2). This is as expected, given the bi-partisan structure of the FTC as opposed to the more unified composition of the DOJ.

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[54] For examples of DOJ Antitrust Division leadership speeches with extreme Neo-Brandeisian and Chicago School scores, *see* appendix D.
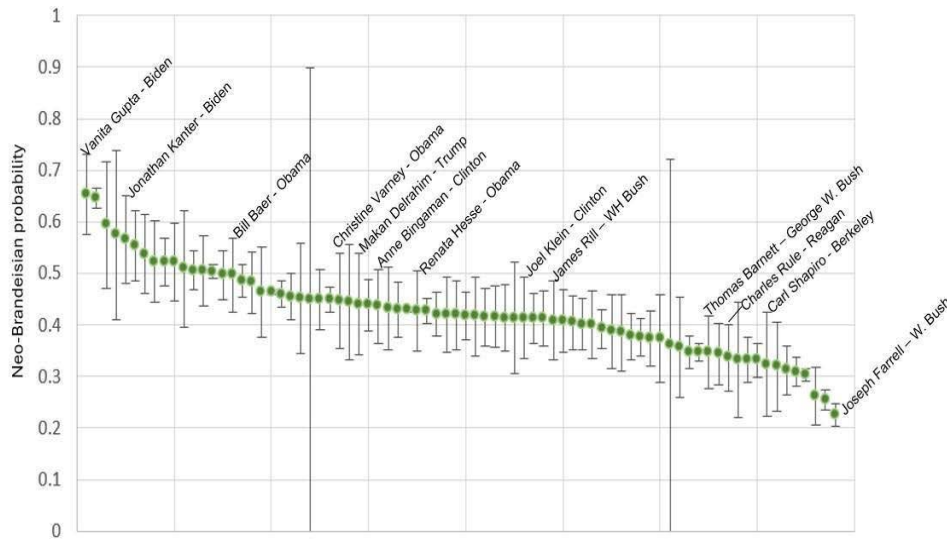
Figure XIII: Selected DOJ Speeches by Appointing President

95% confidence intervals

Data: https://www.justice.gov/atr/speeches

Is it accurate to assert that the DOJ Antitrust Division consistently reflects the perspectives of the President who appointed its leadership? As I discuss in Section 7, the matter of whether bureaucracies, including entities like the DOJ, operate under strict control by their political principals or retain the capacity to pursue alternative preferences, is a prominent theme within the realms of economic and political science literature, especially for contentious areas such as antitrust policy. Figure 13 plots the average speech score for each speaker, ordered from highest to lowest, and highlights some illustrative cases identifying the appointing president.[55] The configuration of appointing presidents fits expectations, with Republican president's appointees generally to the right and Democratic president's appointees to the left. President Biden's self-declared Neo-Brandeisian Assistant Attorney General Jonathan Kanter has one of the highest Neo-Brandeisian speech scores.

VI. The Evolution of Attitudes in Antitrust Legislation and Guidelines

To gain insight into the evolving perspectives on antitrust policy enforcement, it's instructive to examine the legislation governing the sector, along with the iterative updates of the policy guidelines. This analysis specifically concentrates on the seven iterations of the Horizontal Merger Guidelines (HMG), initially introduced in 1968 and subsequently periodically revised to reflect the changing economic

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[55] Appendix E shows the distribution of the number of speeches per speaker.

landscape and enforcement philosophies. Most recently, in 2023, the FTC and DOJ jointly released an update to the 2010 HMG.[56] This initiative was a direct response to an executive order from President Biden in 2021, signaling a renewed focus on antitrust scrutiny. For comparison, I include in this exercise an examination of four pivotal antitrust laws that have significantly shaped the field: the foundational Sherman Act of 1890, the Clayton Act of 1914, the Robinson-Patman Act of 1936, and the Celler-Kefauver Act of 1950. Together, these legislative acts and policy guidelines provide a comprehensive view of the trajectory and nuances of antitrust policy over time.
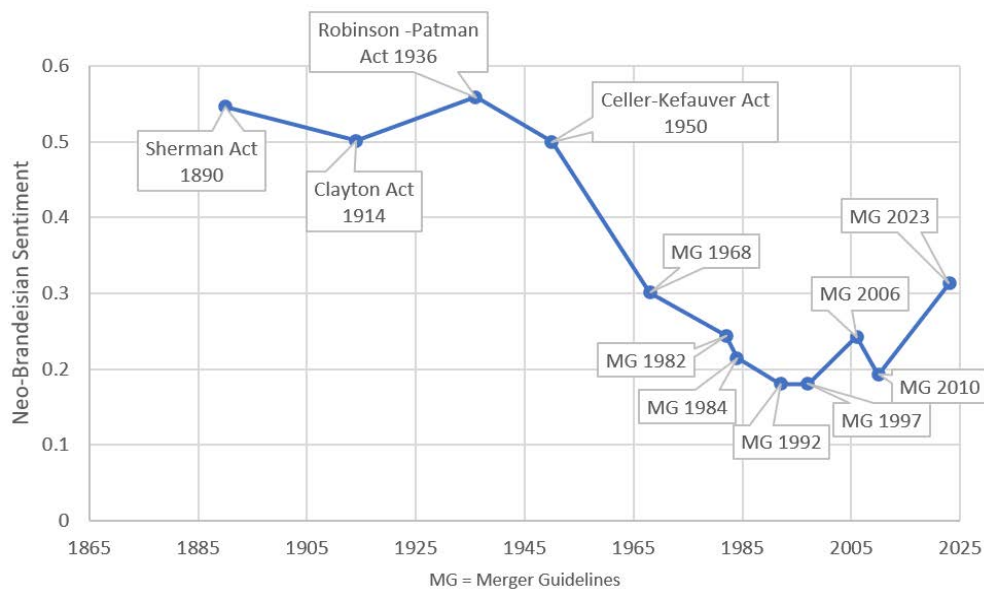
Figure XIV: Antitrust stringency of major antitrust legislation
Calculated by passing each piece of legislation through the antitrust belief algorithm.

The Horizontal Merger Guidelines (HMGs) are not laws or legislative acts but rather a comprehensive exposition of the methodologies and analytical strategies that the FTC and DOJ employ during the review of potential mergers. According to Rose and Shapiro , the guidelines are written to address three key audiences and objectives: "(1) to inform the business community, so as to deter anticompetitive mergers; (2) to participate in a dialogue with the courts, so as to further the development of the case law; and (3) to provide a handbook to Agency staff."[57] This multifaceted purpose underscores the significance of any revisions to the HMGs, indicating a recalibration in the prevailing perceptions and enforcement strategies

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[56] Fed. Trade Comm'n & U.S. Dep't of Justice, Horizontal Merger Guidelines (2023).

[57] Nancy L. Rose & Carl Shapiro, *What Next for the Horizontal Merger Guidelines?*, ANTITRUST MAGAZINE SPRING (2022).

pertaining to antitrust regulations—the central theme under investigation in this paper.

The HMGs influence realms of government operations, corporate decision-making, and judicial review processes. They play a pivotal role in shaping the conduct of both the government and merging entities. More profoundly, they resonate within the judicial landscape, guiding the evaluation of mergers' legality under antitrust laws and thereby influencing the evolution of legal antitrust doctrines.[58]

Figure XIV presents the value of the antitrust sentiment index estimated by the proposed algorithm, for each iteration of the Horizontal Merger Guidelines (HMGs) alongside the previous antitrust legislation. The graph, once again, suggests the emergence of an 'arc of antitrust,' wherein the foundational legislation, commencing with the Sherman Act, garners notably higher scores compared to the HMGs. These guidelines exhibit a downward trajectory from their inception in 1968 through the successive iterations that predominantly align with the period of ascendancy of the Chicago School of thought. An exception is observed in the 1995 version, which registers an uncharacteristically elevated score. The recent 2023 revision of the HMGs conspicuously reflects the Neo-Brandeisian ethos of the Biden administration's FTC and DOJ.[59]

While the new HMG does not necessitate formal endorsement from any external agency or legislative body, the antitrust agencies customarily engage in a process of public discourse, inviting input from academics, industry experts, legal professionals, and other pertinent stakeholders. This consultative approach is instrumental in fostering transparency and inclusivity in the revision process. The successful implementation and influence of the revised guidelines are contingent upon the endorsement and acceptance by key stakeholders, including the courts, Congress, and the market. A lack of consensus or support from these critical entities could potentially hinder the adoption and effectiveness of the new guidelines, underscoring the intricate balance between regulatory intent and stakeholder buy-in within the realm of antitrust policy formulation.

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[58] Carl Shapiro & Howard Shelanski, *Judicial response to the 2010 Horizontal Merger Guidelines*, 58 Rev. Ind'l Org. 51–79 (2021).

[59] Fed. Trade Comm'n & U.S. Dep't of Justice, Horizontal Merger Guidelines (2023).

VII. Bureaucratic Discretion or Congressional Control?

The recent Neo-Brandeisian shift in beliefs and attitudes that I detailed in previous sections raises the question of whether such a transformation presages a more interventionist antitrust policy in the forthcoming years. My index is based on speeches, blog posts, and other textual discourse, and thus offers a measure of beliefs but not of actions, such as the frequency of blocked mergers or the imposition of fines by regulatory bodies. The transition to a Neo-Brandeisian or Chicago School position within these agencies does not inexorably lead to corresponding policy outcomes, owing to the intricate web of formal and informal institutions that dictate the trajectory of antitrust policy. The effect on outcomes is contingent upon the complex interplay among various stakeholders, including judicial bodies, legislative entities, interest groups, media, and public sentiment.

In the United States, a critical mechanism of oversight of antitrust agencies is embodied in the form of thematic committees and subcommittees within Congress, notably the Judiciary Committees and the Committees on Energy and Commerce in both the House of Representatives and the Senate. A perennial inquiry in the political science and economics literature revolves around the efficacy of such congressional oversight. Is it sufficiently robust to exert meaningful control over the activities of these agencies? Or, conversely, is the principal-agent dynamic between Congress and the regulatory bodies so beset with informational asymmetries that, ultimately, the agencies retain considerable latitude to advance their own agendas? This inquiry remains pivotal in understanding the nexus between legislative oversight and agency autonomy within the context of antitrust policy implementation. I do not seek to fully answer this question in this final section, but rather I use it to illustrate how, beyond simple measurement of attitudes, the antitrust index proposed in this paper can be used to empirically address such analytical questions.

In a classic paper that helped to introduce the new institutional rational choice approach to political relations based on a model of agency decision making, Weingast and Moran noted that the relevant oversight committees possess the means to sanction and reward agencies to safeguard that their interests are faithfully considered even without careful or explicit guidance from the committee.[60] These means include fiscal levers such as budgetary appropriations, the capacity to conduct public hearings and investigations, and the prerogative to endorse or veto presidential nominations. Weingast and Moran posit that the mere existence of these

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[60] Weingast & Moran, *supra* note 28.

oversight tools, and the implicit threat of their deployment, suffices to align agency behavior with committee preferences, often rendering the actual application of sanctions an infrequent necessity.[61] The efficacy of these controls underscores the subtle, yet potent, influence of legislative oversight in shaping bureaucratic conduct and ensuring agency accountability.

To empirically test whether the FTC's highly interventionist (Brandeisian) behavior during the 1960s and 1970s was due to bureaucratic discretion or congressional dominance, the authors leveraged the fact that after 1979, the FTC dramatically changed its behavior halting several investigations and adopted a much more hands-off (Chicago School) approach to antitrust. [62] Their empirical strategy consisted of comparing the preferences of the FTC's oversight committee in the Senate relative to the entire Senate. This is based on the notion that committees have special prerogatives and powers - specialized knowledge, gate-keeping authority, agenda setting power, and control over the flow of information—that allow them to act as "legislative cartels" that often prevail over the preferences of the chamber as a whole.[63] They use ADA (Americans for Democratic Action) scores to proxy for legislator's preferences.[64] They show that precisely at this time there was a marked turnaround in the composition of the committee, with the preference of the subcommittee chairman and subcommittee mean passing from greater (more liberal) to lower (less liberal) than the Senate mean.[65] Their conclusion was that the FTC's change in behavior was not due to agency discretion, but that all the time the FTC was acting at the behest of its congressional principal. When the individual principals changed, the FTC acted accordingly.

Because the Weingast and Moran paper was published in 1983, their time series of legislators' preferences ends abruptly, just one year after the switch of committee and subcommittee from more to less liberal than the Senate mean (Figure IV in the

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[61] *Id.*

[62] Although I treat a Brandeisian approach as similar to a Neo-Brandeisian approach, there are some differences, besides the timing. One of the main differences is the Neo-Brandeisian concern with the tech industry and concerns over political power. Also, Neo-Brandeisian's see the need to undo several decades of antitrust that in their perception has been too lenient and narrowly focused.

[63] Barry R. Weingast & William J. Marshall, *The Industrial Organization of Congress; or, Why Legislatures, Like Firms, Are Not Organized as Markets*, 96 JOURNAL OF POLITICAL ECONOMY 132-163 (1988).

[64] The ADA scores all members of Congress by tallying their votes on 20 chosen roll calls classified according to a political liberalism criteria. Since Weingast & Moran, *supra* note 28. The use of ADA scores for proxying ideology has become standard practice. ADA VOTING RECORDS, https://adaction.org/ada-voting-records/ (last visited June 8, 2024).

[65] Weingast & Moran, *supra* note 28, perform additional tests to show that the FTC's choice of categories of cases to purse also changed in accordance with the congressional dominance hypothesis.

cited paper).[66] Readers may wonder if the pattern continued in subsequent years as the composition in the Senate periodically fluctuated. In Figure XV I show the extension of their data for the years after 1979. The graph shows how the control of the committee and subcommittee changes according to which party had a majority in the Senate. The Senate mean score has been standardized to 50 in each year to make it easier to see when the committee and chair means are above those of the Senate (the non-standardized graph is available in appendix F). By regimental design the majority party appoints the chairs and holds a majority number of seats, and thus votes, in the committee and subcommittee. The control of the committees does not necessarily coincide with the party of the President, as the US system frequently results in divided government between the executive and congress.

The change in committee preference that Weingsat and Moran explored was the switch of chair and mean committee preference from above to below that of the Senate in 1979-1980, as the Senate moved from a Democrat to a Republican majority.[67] The subsequent evolution of the committee and subcommittee mean that I present in Figure XV, show that since the upheaval in committee preference in 1979-1980 explored by Weingast and Moran there have been frequent other such reversals.[68] This allows me to test whether FTC speech attitudes have varied as expected by the congressional dominance hypothesis.[69] While the committee and subcommittee chairs' preference are clearly above or below the Senate majority as it shifts from Democrat to Republican, the committee and subcommittee means often, but not always, lie in the expected half of the graph. Although the power of committee chairs has reduced since the 1970s, they still control agenda setting, hearing dates, markup sessions, committee staffing decision, media influence and other powers that makes their preferences more than proportionally influential over committee decisions and outcomes.[70] The purpose here is not present a full-blown update on the Congressional Dominance test in Weingast and Moran, but rather to show how the antitrust attitude index developed in this paper can be used in such an analysis.[71]
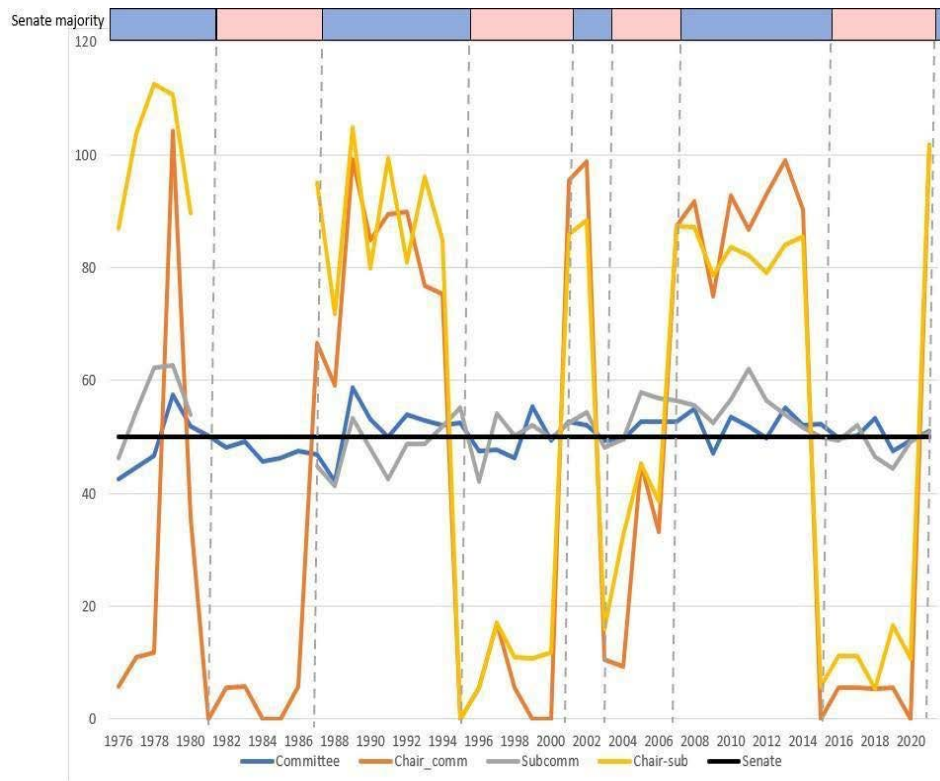
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[66] Weingast & Moran, *supra* note 28.

[67] Weingast & Moran, *supra* note 28.

[68] *Id.*

[69] *Id.*

[70] WALTER J. OLESZEK ET AL., CONGRESSIONAL PROECDURES AND THE POLICY PROCESS (2020).

[71] Weingast & Moran, *supra* note 28.

Figure XV: Senate, Judiciary Committee, and Antitrust, Competition Policy and Consumer Rights Subcommittee Mean ADA Scores

Senate mean score standardized to 50 in each year to facilitate comparability. ADA scores available at https://adaction.org/ada-voting-records/. Subcommittee composition data is missing from the Congressional Directory from 1981 to 1986. Senate majorities: blue = Democrat, red – Republican.

Whereas Weingast and Moran tested whether a change in committee preference relative to the full Senate led to change in FTC policy dynamism, I propose to test whether it led to a change in the antitrust attitude index of the speeches by FTC leadership for the period of 1976 to 2021.[72] Do FTC commissioners recalibrate the tenor and substance of their public pronouncements in response to the advent of oversight committees that diverge from those to which they were previously acclimated? Furthermore, this exercise seeks to determine whether the doctrinal rhetoric—be it reflective of Chicago School principles or Neo-Brandeisian perspectives—undergoes amplification or diminution contingent upon the ideological realignments of the oversight committees.

The emergent discord between the Neo-Brandeisian leadership currently at the helm of the Federal Trade Commission (FTC) and the Republican leadership presiding over the House oversight committees—specifically the Judiciary and Energy and Commerce Committees—offers a revealing illustration of the potentially

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[72] Weingast & Moran, *supra* note 28.

fraught dynamics that can characterize the interactions between congressional committees and federal agencies. On July 12, 2023, the committees' leadership sent a letter to the FTC Chair, Lina Khan, informing that:

> "The House Committee on the Judiciary and the Committee on Energy and Commerce are conducting oversight of the Federal Trade Commission (FTC). After two years under your leadership, public information raises serious concerns about mismanagement, a "toxic" environment, and a failure to enforce antitrust and consumer protection laws. As we continue to examine these matters to inform legislative reforms, we expect your full cooperation with our oversight."[73]

In a response in November 3, 2023, the head of the FTC, stated that she "welcome(d) the opportunity to engage with Members of Congress about the FTC's efforts to protect citizens from illegal mergers and excessive consolidation," but also defended the agency from various criticisms in the committees' letter, for example by stating that "by choosing to focus on only a handful of cases, your letter paints an inaccurate picture of the FTC's merger enforcement program."[74] To this, the committees responded:

> "We were surprised by the unusual tone and the baseless accusations made in your letter, and we are disappointed that you chose to leak it to the press before transmitting it to the Committee. The Committee is conducting constitutional oversight of the Federal Trade Commission (FTC), as we have repeatedly communicated to you and FTC staff. [...] The oversight you are blocking concerns your mistreatment and mismanagement of career FTC employees, and your unusual response to this oversight, forces us to examine whether you and your senior staff are attempting to obstruct the Committee's oversight to prevent potential embarrassment. This concerted effort to obstruct the Committee's oversight must stop."[75]

This acrimonious exchange, only excerpts of which are presented above, is reminiscent of the tumultuous period in FTC history described in Weingast and Moran.[76] Decades of fervent antitrust activism by the FTC was only disrupted by a

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[73] U.S. Congress, *Letter to the Honorable Lina M. Khan* (July 12, 2023),
https://subscriber.politicopro.com/f/?id=00000189-4c3a-d8dd-a1ed-7c3f35170000.

[74] Fed. Trade Comm'n, *Letter to the Honorable Thomas P. Tiffany* (November 3, 2023),
https://www.ftc.gov/system/files/ftc_gov/pdf/2023.11.3_chair_khan_letter_to_rep._tiffany_re_merger_challenges.pdf.

[75] U.S. Congress, House Comm. on the Judiciary, *Letter to the Honorable Lina Khan* (July 28, 2023),
https://judiciary.house.gov/sites/evo-subsites/republicans-judiciary.house.gov/files/evo-media-document/2023-07-28-jdj-to-ftc-re-tis.pdf.

[76] Weingast & Moran, *supra* note 28.

significant shift in composition within the oversight committees in the late 1970s. The new committees only managed to reign in the FTC and align its policy-making effort to their own Chicago School style preferences through a series of sanctions and drastic measures that included the dissolution of the agency, which was ultimately rescinded as the agency's behavior fell into line. It remains to be seen whether the same dynamics will play out in the current confrontation.

Given the pivotal role played by congressional oversight committees in shaping the budgetary framework and appropriations allocated to federal agencies like the Federal Trade Commission, it may be that the agencies' commissioners might strategically calibrate both the substance and delivery of their speeches and public communications. Even more than beliefs and ideology, what determines how much antitrust enforcement of one sort or another gets done, is the availability of resources. And the antitrust agencies have been severely underfunded in the past decades despite a growing economy and a challenging antitrust landscape.[77] In this context, the committees' influence over the agencies' budgetary fortunes is a particularly effective instrument of control, as commissioners perceive that the bravado and confrontation in their speeches at important events may have real costs to the agency.

To test whether there is any evidence of change in the nature of the FTC commissioners' speeches, I use the full set of FTC speeches since 1976 and regress the antitrust attitude index on the three lags and three leads that surround a change in composition in the Senate Judiciary committee. There are eight instances in the 1976 to 2021 period when the chair and majority of the committee switched parties and moved from one side of the Senate mean to the other. I distinguish the changes where a Democrat dominated committee gave way to a Republican dominated committee from those when the leadership went the other way. There are four instances of each direction of change (*see* Figure XV). I control for year, speaker effect, party effect, whether the speaker was chair of the FTC, and whether the speaker was not a commissioner, so that the estimated coefficients should more cleanly capture the change in the antitrust stringency index of speeches due to changes in the committee's mean preference.[78]

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[77] Chris Jay Hoofnagle, Woodrow Hartzog, & Daniel J. Solove, *The FTC Can Rise to the Privacy Challenge, but not Without Help from Congress,* BROOKINGS (Aug. 8, 2019), https://www.brookings.edu/articles/the-ftc-can-rise-to-the-privacy-challenge-but-not-without-help-from-congress/.

[78] The full regression results are in appendix G.

Figure XVI shows the estimated coefficients of the lagged and leading FTC speech index. When the Committee changed from a Democrat chair to a Republican chair and majority, there is evidence that, on average across the four instances, FTC speeches moved towards a more Chicago School compatible position, especially in the second and third years after the change (upper panel Figure XVI). Interestingly there was no analogous change when the change was from a Republican to a Democrat dominated agency.

Explaining these patterns requires going further into the institutions and political economy of antitrust in the US and is beyond the scope of this paper. Efforts in this direction should probably consider the role of interest groups and how they influence the incentives of courts and of the committees. The period covered by the data in the exercise above is the period in which Chicago School antitrust prevailed in the US. Several studies have suggested that the main determinant of the ascendancy of this style of antitrust was not in the domain of beliefs or ideas, but rather due to the concerted effort of big business.
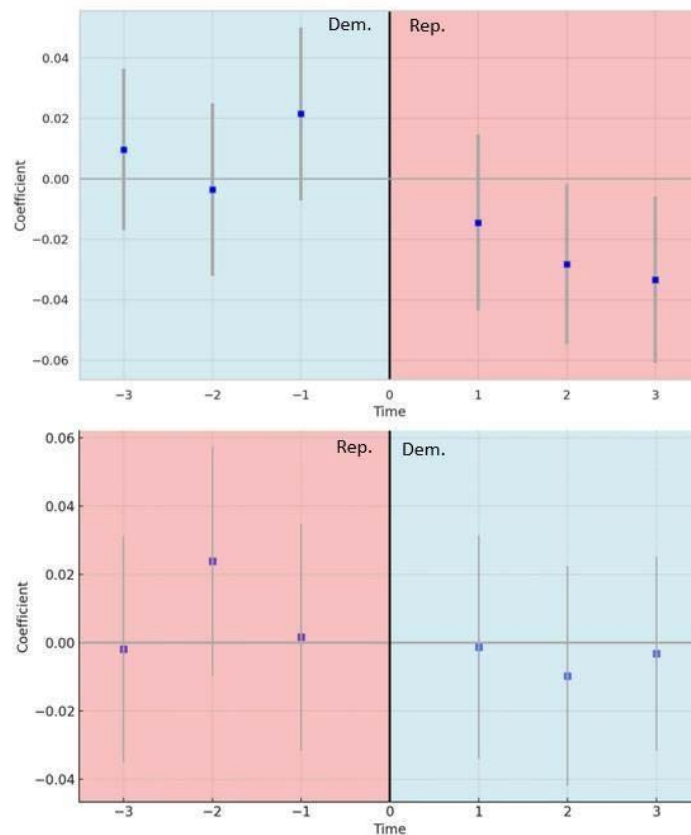
Figure XVI: Average FTC Speech Stringency Before and After Senate Subcommittee ADA Change

Calculated through a regression of the Neo-Brandeisian speech index on three lags and three leads, including controls for year, year squared, chairperson dummy, non-commissioner dummy, Republican dummy, and speaker fixed effects. Robust standard errors. Blue (red) represents periods when the Senate Judiciary Committee and the Subcommittee on Competition Policy had Democratic majority (Republican), Antitrust and Consumer Rights. Time zero are years when the majority in the Senate changed parties.

From 1999 to 2017, the top spender on lobbying in the US was the Chamber of Commerce, and several industries that are potentially affected by antitrust, such as the medical, pharmaceutical, telecommunications, oil and gas and defense, are among the top 20.[79] With such forces pushing towards weaker antitrust enforcement, it should be easier for FTC commissioners to, *ceteris paribus*, change the tone and content of their speeches toward a more Chicago School position when the committee also moved in that direction, switching from Democrat to Republican leadership. When the switch went the other way, the powerful forces of big business lobbying continued to offer resistance to positions espousing more active and intrusive antitrust. The current tussle between the new Neo-Brandeisian leadership at the FTC may simply be the latest iteration of this type of dynamic.

VIII. Conclusion

The analysis of policymaking and political interaction requires a knowledge of both the institutions that determine incentives, constraints and transaction costs, and the preferences of the entities involved. Data on preferences can be particularly challenging to come by. One way to get around this problem is to use proxies derived from agent's actions to get a revealed preference measure, such as using the number of mergers that an antitrust agency challenges as a measure of their views on antitrust. However, the agency's actions are the endogenous result of the incentives and constraints it faces, together with those of all the other players with which it interacts, so that final choices may be a poor indication of actual preferences. An alternative to get around these problems is to measure preferences through what the actors say or write through many forms of communication. Though speech and text may also be endogenously determined, they are likely less so than policy action, especially when large numbers of documents are used. In this article I suggest a text-based, machine learning-derived index of antitrust belief that provides such a measure of preferences and beliefs.

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[79] Nolan McCarty & Sepher Shahshahani, *Testing Political Antitrust*, 98 New York U. L. Rev. 1169 (2023).

In this paper, I compiled and analyzed a corpus that included antitrust-related blog posts and a range of pertinent documents. I employed a machine learning classifier to develop an index that categorizes texts according to their antitrust ideologies, aligning content on a continuum from Chicago School to Neo-Brandeisian thought. This algorithm was applied to various textual collections: (i) antitrust-focused blogs; (ii) official FTC blog publications; (iii) public speeches by FTC leadership; (iv) public addresses by DOJ leadership; and (v) key antitrust documents, particularly merger guidelines.

This paper contributes to the growing field of natural language processing in the social sciences. These methods have unlocked a wealth of data that was previously inaccessible for quantitative analysis. Such information enables comparisons with traditional data sources—like contrasting merger counts with a text-based index of antitrust attitudes—while also allowing for the quantification of intangible elements such as beliefs, attitudes, and institutional dynamics. These measures are valuable in their own right and can be utilized in various analytical frameworks, including regression analysis. The novelty of text-based methods lies not only in their innovative approach but also in the originality of the questions they address and the suitability of the data to those questions. In this study, we developed an index of Chicago School versus Neo-Brandeisian attitudes from a large corpus of speeches and texts by various antitrust policy actors. This enabled us to quantify and rank different organizations, such as the FTC and DOJ, and even assign values to individuals like FTC commissioners or DOJ attorneys. Furthermore, our findings facilitate temporal comparisons, allowing us to identify shifts towards Neo-Brandeisian attitudes and pinpoint their onset across different organizations. In the final section, we demonstrated how this data could be employed to explore analytical questions, such as "who controls the bureaucracy?"

Future work can extend this analysis to include additional key actors in antitrust, provided there are available text corpora. Potential examples include speeches by other antitrust agencies such as the European Commission and the British Competition and Markets Authority, opinions and dissents from the Supreme Court and lower courts, antitrust discussions in the annual Economic Report to the President by the Council of Economic Advisers, and speeches from Senate and House subcommittees on antitrust. Incorporating these additional sources would provide a more comprehensive understanding of the evolving landscape of antitrust policy.

Appendix A: Top 10 words for each of the 15 topics identified by the LDA algorithm for each corpus

Blog posts

Topic 1: individual, antitrust division, investigation, compliance, leniency, case, antitrust, criminal, company, cartel

Topic 2: time, big, american, year, people, business, market, monopoly, power, company

Topic 3: decision, plaintiff, defendant, law, supreme court, agreement, rule, case, antitrust, court

Topic 4: payment, ftc, cost, company, price, doj, patent, generic, settlement, drug

Topic 5: board, competition, bank, financial, private, federal, law, public, government, state

Topic 6: risk, practice, agency, privacy, protection, information, use, consumer, ftc, data

Topic 7: fcc, risk, regulator, market, sector, rule, network, regulatory, service, regulation

Topic 8: sale, apple, pricing, cost, firm, market, product, consumer, amazon, price

Topic 9: company, year, agency, review, ftc, deal, party, acquisition, transaction, merger

Topic 10: company, online, data, facebook, service, competition, user, digital, market, platform

Topic 11: analysis, evidence, competitive, case, firm, guideline, competition, effect, merger, market

Topic 12: consumer, result, antitrust, wage, employer, android, advertising, worker, search, google

Topic 13: merger, enforcement, consumer, law, market, policy, economic, firm, competition, antitrust

Topic 14: authority, agreement, whether, article, competition law, court, decision, competition, case, commission

Topic 15: think, case, make, law, license, use, standard, technology, right, patent

FTC

Topic 1: merger, international, policy, state, ftc, antitrust, law, enforcement, agency, competition

Topic 2: company, protection, 2014, consumer, gov, www, privacy, http, data, ftc

Topic 3: law, state, competition, economic, rule, conduct, case, price, court, antitrust

Topic 4: consent, action, party, complaint, decision, ftc, order, court, case, commission

Topic 5: law, rule, action, case, debt, fraud, protection, enforcement, ftc, consumer

Topic 6: injury, competition, conduct, statement, case, unfair, ftc, act, commission, section

Topic 7: think, state, way, american, today, people, government, business, time, year

Topic 8: food, industry, self, marketing, commission, product, ftc, claim, consumer, advertising

Topic 9: market, competition, product, technology, intellectual property, drug, standard, generic, innovation, patent

Topic 10: federal trade commission, price, law, business, rule, act, industry, trade, practice, commission

Topic 11: commission, ftc, personal, identity, child, online, internet, privacy, information, consumer

Topic 12: market, fed, comm, http, merger, pdf, competition, gov, www, ftc

Topic 13: ftc, cost, competition, provider, physician, service, state, hospital, care, health

Topic 14: device, report, mobile, company, security, ftc, information, privacy, consumer, data

Topic 15: analysis, efficiency, competitive, product, competition, effect, firm, price, market, merger

DOJ

Topic 1: year, work, icn, jurisdiction, merger, enforcement, cooperation, international, competition, agency

Topic 2: industry, consumer, market, service, hospital, network, competition, provider, care, health

Topic 3: commission, policy, regulatory, price, business, government, competition, law, industry, regulation

Topic 4: business, platform, economy, consumer, product, technology, firm, competition, innovation, market

Topic 5: competition, innovation, policy, license, technology, right, licensing, intellectual property, standard, patent

Topic 6: atr, public, competition, gov, party, merger, www, remedy, justice, division

Topic 7: price, fine, year, enforcement, program, company, case, investigation, division, criminal

Topic 8: criminal, investigation, international, program, amnesty, company, leniency, fine, division, cartel

Topic 9: likely, analysis, agreement, cost, effect, merger, product, firm, price, market

Topic 10: decision, competition, act, supreme court, section, united, conduct, case, law, court

Topic 11: law, competitive, consumer, price, efficiency, firm, economic, market, competition, merger

Topic 12: competition, work, time, attorney general, american, today, case, year, division, law

Topic 13: antitrust enforcement, case, enforcement, market, trade, country, agreement, law, international, foreign

Topic 14: business, agency, party, competitive, review, bank, guideline, transaction, market, merger

Topic 15: bell, distance, telecommunication, airline, long, carrier, market, local, competition, service

Appendix B

A. Examples of documents classified as Chicago School in the training set

Alden Abbott, *FTC's Amazon Complaint: Perhaps the Greatest Affront to Consumer and Producer Welfare in Antitrust History* (Truth on the Market, September 27, 2023)

"The FTC—joined (unfortunately) by 17 state attorneys general—on Sept. 26 filed its much-anticipated antitrust complaint against Amazon in the U.S. District Court for the Western District of Washington. Lacking all sense of irony, Deputy Director Newman, quoted above, bragged about the case's potential to do greater good than almost all previous antitrust lawsuits. A quick perusal of the FTC's press release announcing the suit reveals the basic claims the FTC will be making in court. While full details are set forth in the commission's formal complaint, the press release provides one sufficient reason to believe that this high-profile antitrust complaint is baseless. A few initial comments on this travesty of a lawsuit follow."

Ramsi Woodcock, *What Am I Missing?* (What Am I Missing, November 19, 2021)

"When you first enter antitrust from the left, you are struck by what appears to be a travesty: that a firm that monopolizes an input can get away with denying that input to downstream competitors.

One thinks to oneself: A monopoly using its power to smash a competitor. How is that not an antitrust violation? An antitrust that fails to prohibit that is a perverse, hollowed-out thing captured by the evil it was constituted to destroy. It is the equivalent of the criminal law not prohibiting killing with malice aforethought. Or the contract law not enforcing promises.

And then you get over it, because actually prohibiting monopolists from denying essential inputs to their competitors makes no sense. (I will explain momentarily.)

The trouble with antitrust today is that those setting the agenda from the left haven't been in the field long enough to get over it.

And so we are left with the embarrassing legislation against "self-preferencing" that is currently making its way through Congress."

B. Examples of documents classified as Neo-Brandeisian in the training set

Sandeep Vaheesan, *Make Antitrust Democratic Again!* (Open Markets Blog, November 12, 2019)

"Corporate monopolies and oligopolies heighten the risk of a recession—and they certainly don't help matters once a downturn is underway. They create a vicious cycle, transferring wealth upward and moving the disposable income and wages of the many into the investment

accounts of the few. Wave after wave of consolidation has shuttered plants, stores, warehouses, and transportation hubs around the country. Together with fiscal austerity and low union density, concentrated corporate power weakens Americans' purchasing power, decreasing the demand for goods and services. Weak consumption by households, in turn, impedes full employment and increases the likelihood of recessions. ... "

Matt Stoller, The Great Breakup of Big Tech is Finally Beginning (The Guardian, September 9, 2019)

"The great breakup of big tech is finally beginning. Last week, state attorneys general, led by Texas and New York, announced investigations into Google and Facebook for possible antitrust violations. This is a big deal. No society has ever centralized control of information as we have in big tech, and this is the first real American strike at the problem. As Scott Galloway frequently notes in his podcast with tech journalist Kara Swisher, the big tech breakup has finally begun. What have Google and Facebook done to merit such attention from authorities? To put it simply, they use their control of the flow of information to monopolize advertising revenue, killing newspapers across the country and around the world and eliminating potential competitors in a host of areas. Since 2007, a little less than half of all newspaper journalism jobs in the US have been eliminated. Out of America's 3,000 counties, two-thirds now have no daily newspaper. Every sector of news gathering is in decline, and not because the appetite for news is down. People want news. But the traffic and ad revenue that used to flow from news now flows to the digital duo. [...]"

Appendix C: Commissioners, Chairwomen and Chairmen of the Federal Trade Commission over Time

Note: This graph is taken from the FTC webpage (https://www.ftc.gov/system/files/attachments/commissioners/ commissioner chart timeline.pdf) but has been modified to indicate each individual's partisan affiliation and which side holds the majority.

Appendix D: Examples of extreme speeches in the DOJ speech corpus

Chicago School

William J. Kolasky, "Conglomerate Mergers And Range Effects: It's A Long Way From Chicago To Brussels" (November 9, 2001),
https://www.justice.gov/atr/speech/conglomerate-mergers-and-range-effects-its-long-way-chicago-brussels

Makan Delrahim, "Assistant Attorney General Makan Delrahim Delivers Remarks at the Federalist Society National" (November 14, 2019),
https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-federalistsociety-national
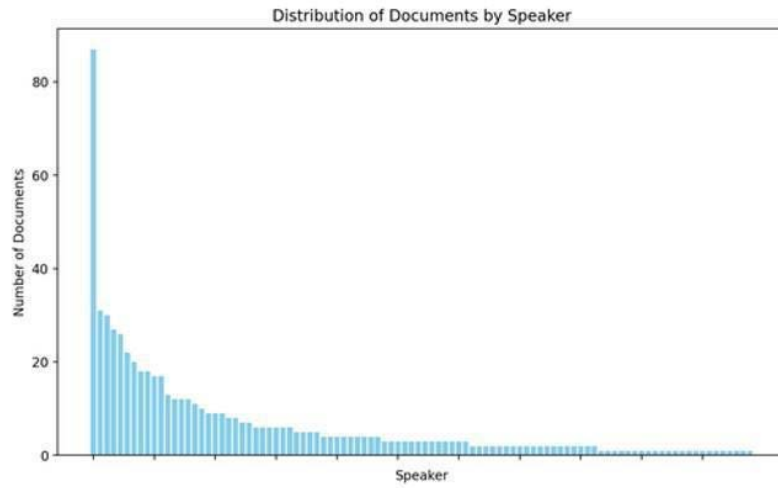
R. Hewitt Pate, "Competition and Politics" (June 6, 2006),
https://www.justice.gov/d9/atr/speeches/attachments/2015/06/25/210522.pdf

Neo-Brandeisian

Johnathan Kanter, "Assistant Attorney General Jonathan Kanter Delivers Remarks at New York City Bar Association's (May 18, 2022), https://www.justice.gov/opa/speech/assistant-attorney-general-jonathan-kanter-delivers-remarks-newyork-city-bar-association

John H. Shenefield, "Antitrust and Evolution: New Concepts for New Problems" (November 18, 1977), https://www.justice.gov/atr/speech/file/1240241/dl?inline

Appendix E: Distribution of the number of speeches per speaker in the DOJ corpus

Distribution of Documents by Speaker

Data: https://www.justice.gov/atr/speeches
Total number of speeches: 632

Appendix F: Non-standardized ADA scores for Senate, Judiciary Committee, and Antitrust, Competition Policy and Consumer Rights Sub-committee
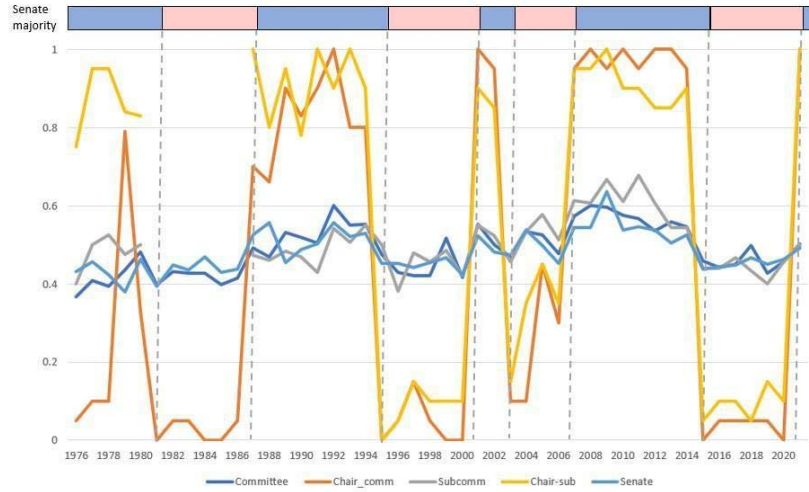
Source: ADA scores available at https://adaction.org/ada-voting-records/. Subcommittee composition data is missing from the Congressional Directory from 1981 to 1986. Senate majorities: blue = Democrat, red Republican

Appendix G: The impact of committee preference on FTC commissioners' speech

Dep. variable	I Neo-Brandeisian prob.
Dem.to Rep. lag 1	0.017
	(1.31)
Dem.to Rep. lag 2	-0.001
	(0.94)
Dem.to Rep. lag 3	0.006
	(0.45)
Dem.to Rep. lead 1	-0.016
	(-1.26)
Dem.to Rep. lead 2	-0.026^{*}
	(-2.14)
Dem.to Rep. lead 3	-0.034^{**}
	(-2.57)
Rep. To Dem. lag 1	0.002
	(0.09)
Rep. To Dem. lag 2	0.024
	(1.41)
Rep. To Dem. lag 3	-0.002
	(-0.12)
Rep. To Dem. lead 1	-0.001
	(-0.08)
Rep. To Dem. lead 2	-0.010
	(-0.60)
Rep. To Dem. lead 3	-0.003
	(-0.23)
Year	0.477
	(1.06)
Year squared	-0.001
	(-1.05)
Chair	0.055^{*}
	(2.06)
Non-commissioner	-0.022)
	(-0.61)
Republican	-0.081^{*}
	(-1.81)
Constant	-485.22
	(-1.08)
Speaker dummies	Yes
Observations	1,438
R-squared	0.39

Notes: Ordinary least squares, robust errors. * 10%, ** 5%, *** 1%.