

Principles of Dynamic Antitrust: Competing Through Innovation

AURELIEN PORTUESE | JUNE 2021

It is time for antitrust policy to reject static models of market analysis and enforcement that rely too much on simplistic indicators such as firm size, industry structure, and prices. Regulators should instead adopt a dynamic approach that recognizes how market power can drive innovation—and how disruptive innovation keeps market power in check.

KEY TAKEAWAYS

- Antitrust policy is at a crossroads, stuck between static approaches to regulating competition that fail to adequately account for the central role that innovation plays in the economy—not just in powering growth, but in disrupting market power.
- Antitrust policy also must recognize that market power is critical for innovation, because it enables investment in research and development to bring new ideas to market.
- Innovation-based antitrust thus requires a dynamic approach to assessing markets, understanding that perfect competition is the enemy of good competition, whereas imperfect competition is the source of innovation.
- Adopting a dynamic approach to antitrust will require reforming the tools and metrics that regulators use to define and assess markets to better understand potential competition and follow the general rule of reason in enforcing antitrust laws.
- Principles of dynamic antitrust suggest that enforcement priorities focus on cartels and collusive practices over unilateral conduct, and focus on certain horizontal mergers over vertical and conglomerate mergers.
- Institutional reforms should ensure antitrust agencies focus on the long-term impact of enforcement and keep pace with the evolution of global markets.

CONTENTS

- Introduction..... 2
- The Antitrust Innovation Paradox 2
 - Antitrust’s History Has Been Dominated by Static Approaches..... 2
 - The Structure-Conduct-Performance Paradigm..... 3
 - The Chicago School 3
 - The Neo-Brandeisian School 5
 - Completing the Modernization Process of Antitrust Enforcement..... 6
- The Need for Dynamic Antitrust..... 8
 - Theoretical Underpinning of Dynamic Antitrust 8
 - Dynamic Antitrust for Consumer Benefits 9
 - Dynamic Antitrust for Social Innovation..... 10
- The Implications of Dynamic Antitrust..... 11
 - Enforcement Principles 11
 - The Tools of Dynamic Antitrust 11
 - Enforcement Focus on Cartels and Collusive Practices..... 16
 - Regulatory Self-Restraint on Unilateral Conduct..... 16
 - Institutional Principles 19
 - No Short-Term Political Meddling Into Dynamic Antitrust Enforcement 19
 - Autonomization of Dynamic Antitrust Enforcement..... 20
 - Administrative Organization for Dynamic Antitrust Enforcement 20
 - International Principles 21
 - Extraterritorial Enforcement for Dynamic Antitrust 21
 - Global Dynamic Antitrust..... 22
 - Transatlantic Dynamic Antitrust 22
- Conclusion: Reforming Antitrust From a Dynamic Perspective..... 23
- Endnotes..... 26

INTRODUCTION

It is time for a new approach to antitrust. Not an approach grounded in the populist, neo-Brandeisian ideology that seeks to overturn antitrust's focus on economic welfare and create an economy populated by small firms. It is time to modify the long-standing approach to competition policy that, despite prevailing over the last century, does not give adequate attention to technological innovation and dynamic effects.

Instead, taking inspiration from Joseph Schumpeter's seminal account of the source of innovation, antitrust needs to embed innovation and dynamic effects. First, market power provides firms with resources to innovate. Second, the source of much competition is innovation. Schumpeter's remains the most accurate analysis and intuition for understanding competition, at least in sectors shaped by technological change. Schumpeter wrote that "creative destruction [is] [t]he process of industrial mutation that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one. This process of creative destruction is the essential fact about capitalism. It is what capitalism consists in and what every capitalist concern has got to live in."¹

A dynamic, evolutionary approach to the competitive process needs to become central to antitrust analysis. In particular, antitrust enforcers should focus more on both the innovation benefits derived from firms with at least some market power and the threats to market power from disruptive innovation, including new entrants.

THE ANTITRUST INNOVATION PARADOX

Innovation, for too long, has been an antitrust paradox. Antitrust scholars and enforcers agree that innovation is vital to antitrust enforcement.² Different schools of thought consider innovation to be a prime goal of competition. Yet, despite its well-recognized importance, innovation remains antitrust's missing principle. Rarely is innovation perceived as a prime source of competition. A dynamic approach to competition underlies this crucial relationship.³ Innovation patterns may be unrelated to market structures.⁴

Antitrust debates in both law and economics literature have historically treated innovation with some disdain, or at least neglect. Indeed, innovation has remained an ancillary topic in the antitrust community, which generally agrees on the importance of innovation on competition but also regularly downgrades the role of innovation in antitrust analysis as a mere ancillary parameter. Therefore, antitrust debates take into account innovation for "high-tech markets," "cyberspace markets," or "technology markets" only.⁵ To discriminate between these innovation markets and the non-innovation markets assumes that a dividing line can be drawn. It also assumes that non-innovation markets are not, and cannot be, subjected to the gales of creative destruction from new technology-enabled business models, products, or services. But these markets often equally confront these disruptive and inevitable gales. Therefore, to refer to innovation casually rather than systematically limits the establishment of innovation-based antitrust. Innovation should no longer remain a paradox but should constitute the cornerstone of both the theory and practice of competition policy.

Antitrust's History Has Been Dominated by Static Approaches

The process of creative destruction underpinning innovation as a source of competition operates in disequilibrium, contrary to static models.⁶ The discrepancy between theoretical frameworks of

antitrust policy and entrepreneurial reality remains significant.⁷ Yet, historically, static models have predominantly corseted antitrust enforcement.

The Structure-Conduct-Performance Paradigm

One conspicuous illustration of such mismatch is the structuralist approach to competition problems. Invoking Justice Louis D. Brandeis's heritage in promoting an atomized vision of competition with small and medium-sized firms only, the Neo-Brandeisians perceive industry structure, depicted according to discrete market definition rules, as a determinant of a firm's competitive forces. Neo-Brandeisians aim to revert to the previously debunked Structure-Conduct-Performance (SCP) paradigm that prevailed in the 1950s and 1960s.⁸ This paradigm considers that industry structure determines firms' conduct, which in turn determines market performance.⁹ The SCP paradigm assumes that the more atomistic the market structure can be, the more competitive firms operating in that market will become. These firms' objective is to deconcentrate markets, irrespective of either the costs associated with diseconomies of scale or regulatory barriers, thereby creating expansion and innovation.¹⁰ In other words, smaller companies with weaker market power are believed to deliver a greater level of competition, which, in turn, might spur innovation.¹¹

The discrepancy between theoretical frameworks of antitrust policy and entrepreneurial reality remains significant. A dynamic approach aims at filling the gap between antitrust models and business realities.

Equating market power with market abuse, and idealizing competitive prices charged at marginal cost, the Neo-Brandeisians embrace a hard line on the SCP paradigm that seeks to prevent firms from enjoying any market power and thus spur competition, lower prices, and—they believe—innovation.¹² However, Neo-Brandeisians' fight against firms' market power represents a hindrance to fiercer competition because innovation, resulting from expensive capital investments, becomes unworkable. Profits become so limited that investments are cramped.¹³ When market deconcentration becomes the only guiding principle, considerations of efficiency and innovation become inconsequential because the goal then becomes competition for competition's sake.¹⁴

The Chicago School

Economic analysis led to a steady increase in the understanding of market competition, which contributed to the application of antitrust laws being gradually enhanced after their inception in the United States in 1890. The Chicago School accelerating a gradual rise of such economic analysis from the 1970s onward. After the 1970s, antitrust analysis involved weighing the welfare-decreasing versus welfare-increasing effects of scrutinized firms' conduct. Antitrust analysis gave a stamp of approval for firms' conduct yielding net welfare gains for society. Conversely, it gave a stamp of disapproval whenever the conduct was deemed anticompetitive, as evidenced by higher prices. More precisely, economic effects, rather than legal presumptions or ideological preferences for small firms and competition, played an increasing role in assessing the welfare gains and losses of firms' behavior.

More reasonably, considering the efficiency rationale, the Chicago School ("Chicagoans"), and the "post-Chicagoans" legitimately reject the simplicity and incongruities of the SCP paradigm

based on its mere focus on firms' conduct irrespective of the industry structure.¹⁵ They also better understand the process of scale economies and the associated efficiencies generated by a non-atomistic market structure wherein imperfect competition is not only inevitable but a necessary condition for the improvement of economic welfare.¹⁶

However, both Neo-Brandeisians and Chicagoans keep textbooks' ideal of perfect competition as their North Star. Yet, in industries that really matter to growth and innovation, perfect competition is unfeasible and undesirable.¹⁷ It is a dystopia wherein entrepreneurs cannot invest or innovate. Consumers are stuck with a range of products and services without changes and innovations. This dystopia serves as the antithesis of flagship market players, with other market participants aimed at any economic function other than the entrepreneurial one. To see this, one only need look at the least-developed nations in the world that have very few large firms in favor of very small firms, many operating in a cutthroat informal economy. If there were a linear relationship between competitive intensity and prosperity, developing countries, wherein the share of workers who are self-employed or in family businesses is extremely high and the ratio of market concentration is extremely low, would be among the wealthiest nations in the world, rather than among the most impoverished.¹⁸

Perfect competition is the enemy of good competition. Imperfect competition is the source of innovation.

Against the dystopia of perfect competition, Schumpeter developed a realistic and dynamic approach to competition and innovation. He provided an alternative to the “imaginary golden age of perfect competition that at some time somehow metamorphosed itself into monopolistic age, whereas it is quite clear that perfect competition has at no time been more of a reality than it is at present.”¹⁹

Perfect competition implies free and easy entry into every industry. But, as Schumpeter wrote, “[P]erfectly free entry into a new field may make it impossible to enter it at all.... As a matter of fact, perfect competition is and always has been temporarily suspended whenever anything new is being introduced—automatically or by measures devised for the purpose—even in otherwise perfectly competitive conditions.”²⁰

Chicagoans adopt a structuralist perspective in inferring antitrust analysis, as exemplified in the excessive reliance on market shares, market power, and the number of firms in a given market as indicators for the definition of relevant markets. Market definition rules—which are notoriously static and structuralist—remain inherent to the Chicagoans' antitrust analysis. However soft, the Chicagoans' adopting of structuralist assumptions prevents a fully-fledged dynamic perspective on antitrust matters.²¹ Indeed, their concept of efficiency only integrates allocative and productive efficiencies, thereby neglecting, explicitly or implicitly, dynamic efficiencies—or, in other words, innovation.²² The focus on allocative and productive efficiencies only can be helpful to outside Schumpeterian competition when disruption and innovation are marginal. For example, the telephone industry in the 1950s was focused on static rather than dynamic efficiencies. However, this was no longer true by the 1990s, when innovation in telephony was rampant. Schumpeterian competition better represents the evolutionary perspective of dynamic markets.

Chicagoans' considerable addition to economic understanding, especially regarding consumer welfare, constitutes a significant improvement over antitrust enforcement of the past.²³ Chicagoans understand that some efficiencies drive the process of competition. For the sake of practical convenience, Chicagoans have narrowed these efficiencies to the "consumer welfare" standard. Analyzed in a static perspective, Chicagoans consider that consumer welfare must be maximized, and alternatively, antitrust interventions must minimize consumer harm. Chicagoans' static equilibrium textbook model must not be discarded altogether despite the inherent short-termism of this approach.

The evolutionary process of competition on the merits requires evolutionary economic analysis wherein the objective of innovation and the process of rivalry are taken seriously.

The Neo-Brandeisian School

The neo-Brandeisian approach combines the worst of both doctrines: the short-term approach of the Chicagoans with the structural approach of the Harvard school.²⁴ By this, we mean the school of antitrust thinking that has emerged in the last decade or so, which seeks to overturn the "consumer welfare standard" in favor of a "public interest" standard, reject the Chicagoan approach, and favor small firms over larger ones.

At first glance, Neo-Brandeisians appear to embrace a dynamic approach based on their imperative to create more rivals in the short run.²⁵ But this is not real dynamism from the market or technology; it is forced competition.²⁶ It is a kinked version of innovation wherein competition hampers innovation. In part, this stems from the desire of some Neo-Brandeisians to restrict innovation, as they see creative destruction as having too much destruction, especially for workers who may lose their jobs.

Neo-Brandeisians ignore dynamic competition as a process of innovative disruption that enables firms to profit from innovation and then invest in innovation based on those profits. While misguided, their short-term approach has successfully permeated U.S. antitrust reform discussions.

Competition based on entrepreneurial talents and the capability to innovate needs to pay off, or else innovation incentives for entrepreneurs will be distorted. For every innovation success that gains market share and power, there are tens, if not hundreds, that "gain" only bankruptcy and loss. Market competition must reward, rather than deter, these few entrepreneurial winners. This is not, to be clear, a supply-side economics defense of keeping taxes low on capital gains and the like. Instead, it is a defense of applying antitrust in ways that let innovators keep innovating.

It is common in debates over antitrust to hear that competition is an end in and of itself. This is wrong: Innovation, as the primary driver of change and progress, is the end; competition is only a means. Competition has traditionally been approached either for its own sake (i.e., protecting the necessary rivalry in what is designated as "effective competition") or for immediate, short-term benefits (i.e., protection of consumer welfare in what is designated as "efficient competition"). The former approach, represented by the Neo-Brandeisians, originated with antitrust laws before falling to the latter approach, represented by the Chicagoans. Both approaches see innovation as instrumental to competition, whereas competition principally is instrumental to the social

objective, which is innovation.²⁷ Both perspectives thus approach the interaction between competition and innovation from a highly questionable equilibrium framework.

Since competition sparks from innovation, the notion of fair competition itself reverts to what is desirable innovation—in other words, how much disruptive innovation is acceptable for policymakers. Precautionary approaches by policymakers contribute to lowering the acceptable level of innovation.

Recently, with the shift of the Schlesingerian political pendulum to the left, coupled with the emergence of the techlash, the Chicagoans have lost their influential view on competition in favor of the revival of the old, originalist approach represented by Neo-Brandeisians.²⁸ Consequently, it is time for a coherent and socially desirable antitrust enforcement framework that ensures innovation is at the center of policy considerations.²⁹

Completing the Modernization Process of Antitrust Enforcement

The advent of the consumer welfare standard has proven influential in the modernization of antitrust enforcement, introducing a more objective criterion concerning economic analysis of firms' conduct. The objective of antitrust economics—to focus on the more rigorous approach of the consumer welfare standard—constitutes the most direct route to preserving the process of fair competition. Nevertheless, the modernization process of antitrust enforcement via a focus on the consumer welfare standard, albeit improving the role of efficiency considerations in antitrust analysis, has operated on narrowly framed analytical premises.

First, price analysis has remained the prime baseline for antitrust analysis. Crucial elements inherent to the competition, such as quality and intellectual property rights, have traditionally received less consideration in the efficiency-focused analysis of the consumer welfare standard. Competition increasingly takes place on quality more than merely on price.³⁰ Schumpeter pioneered the charge against the overreliance on price competition to assess the level of market rivalry when he stated,

The first thing to go is the traditional conception of the modus operandi of competition. Economists are at long last emerging from the state in which price competition was all they saw. As soon as quality competition and sales effort are admitted into the sacred precincts of theory, the price variable is ousted from its dominant position. However, it is still competition within a rigid pattern of invariant conditions, methods of production and forms of industrial organization in particular, that practically monopolizes attention. But in capitalist reality as distinguished from its textbook picture, it is not that kind of competition which counts but the competition from the new commodity, the new technology, the new source of supply, the new type of organization (the largest-scale unit of control for instance) competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundation and their very lives.³¹

Quality-based competition suggests a gradual, or even sometimes radical, evolution toward product and service improvements to outcompete rivals.³² On the contrary, price competition suggests a quasi-immediate reaction to market changes and rivals' strategies. Equally, acquiring intellectual property rights may immediately degrade price competition in order to improve quality competition, as capital investments imply some profitability that runs counter to the

allegedly “perfect” competition that’s based solely on prices.³³ The insufficient integration of non-price parameters into the price-centric antitrust analysis weakens the market competition’s pragmatic assessment.³⁴

Second, as its name suggests, the “consumer welfare standard” operates along a welfare-maximization model derived from utilitarianism. Within that model, one can objectively compute consumers’ utility and thus maximize welfare.³⁵ But, individuals’ subjective utility and aggregate welfare cannot legitimately be maximized in an objective, uncontested manner. The welfare-maximization model thus fails to match market realities.

Net present value concerns may justify a decrease in the welfare of present-day consumers (e.g., higher prices, lower output) in order to increase the welfare of tomorrow’s consumers (e.g., lower prices, better quality products, higher output).

Third, the static vision of competition prevails in the efficiency analysis embraced by both the Chicagoans and post-Chicagoans. If not exclusively, they primarily focus on allocative and productive efficiencies, overlooking the fundamental dynamic efficiency that characterizes innovation. The Chicagoans’ static vision does not solve the conflict between present-day and tomorrow’s consumer welfare. For instance, net present value concerns may justify a decrease in the welfare of present-day consumers (e.g., higher prices, lower output) in order to increase the welfare of tomorrow’s consumers (e.g., lower prices, better quality products, higher output).

Fourth, the Chicagoans’ static vision also permeates the analysis of market definition along neatly defined product and geographic markets. There is an overreliance on the calculus of market shares as a proxy for market power. Also, in current antitrust enforcement, potential competition represents only a marginal (if any) concern in terms of competitive threats affecting incumbents. Potential competition, however, represents a considerable force disciplining firms.³⁶ In other words, when firms with market power recognize the possibility that they could be disrupted—something many CEOs now take to heart, as they have seen once-successful firms die after an innovation from a new entrant hits their market, or they read the works of such business scholars as Clayton Christenson—they behave less and less like a traditional monopolist. As innovation becomes increasingly crucial to entrepreneurs’ success, static analysis of antitrust becomes increasingly obsolete.

To be sure, the consumer welfare standard and its associated efficiency analysis constitute incommensurable improvements to antitrust enforcement. But, for the reasons outlined, further improvements are required. Without falling into the neo-Brandeisian chimera, antitrust laws and policies require reforms toward innovation-based antitrust wherein market dynamics, including potential competition, are better integrated into the antitrust analysis.³⁷ A more innovation-based approach can reframe and reform antitrust wherein market dynamics are no longer discarded for ideological agendas.³⁸ An agenda for a dynamic approach to competition with more innovation-based antitrust appears both necessary and timely. We now lay down the principles of “dynamic antitrust.”

THE NEED FOR DYNAMIC ANTITRUST

Dynamic competition should be pursued by antitrust enforcement as an evolutionary process inherent to a capitalist society. This normative stance rests on two broad objectives antitrust enforcement needs to pursue: consumer benefits and societal innovation. Before delving into each of these two objectives, it is necessary to decipher the theoretical underpinnings upon which dynamic antitrust rests.

Theoretical Underpinning of Dynamic Antitrust

Firm rivalry is an inherent part of economic evolution, representing the natural process of companies competing over scarce resources.³⁹ This process involves an evolutionary quest for learning, amassing information, and subsequently turning that information into marketable and strategic knowledge—in other words, into innovation.

Antitrust enforcers should narrow their focus not only on the innovation benefits derived from firms with at least some market power, but also on the threats to market power disruptive innovation, including from new entrants, pose.

Through innovation, the entrepreneur, and to a greater extent, the corporation, may gain a strategic advantage—thus accessing scarce resources (such as investment assets or new customer base) at a greater rate than that of their rivals. Firms exploit the capabilities that enable them to grasp opportunities and innovate. Then, through subsequent marketing of these capabilities, firms innovate in the marketplace. In most industries, it is only through innovation that firms credibly outcompete their rivals. Successful firms often enjoy transitory market powers until rivals' subsequent innovations disrupt their own status as disrupting innovator. The greater a firm's market position allows for the appropriation of value derived from innovation, the more its potential entrants are incentivized to gain these market opportunities themselves via innovation.⁴⁰ Technological progress and market disruption spur effective and aggressive competition, to the benefit of both consumers and innovation overall.⁴¹ In this evolutionary process, innovation enables competition.

Competition, in turn, provides the basis for further innovation.⁴² “Innovation as competition” explains the evolutionary process of discovery for market participants in this rivalrous process. Competition is commonly perceived as a source of innovation. Once in a competitive setting, entrepreneurs are bound to innovate in order to “escape” competitive pressures. These competitive constraints reduce firms' profitability. Hence, neck-and-neck competition prevents firms from growing and gaining the necessary scale, unless entrepreneurs innovate.⁴³ This is “competition-escape-driven” innovation, wherein innovation represents a necessary way out of aggressive competition.⁴⁴

However, this step-by-step innovation to “escape” competition does not fully represent the most critical aspect of the Schumpeterian competition: a competition that does not take place “at the margins.” Instead, Schumpeter described competition that disrupts established companies and business models thanks to innovation.⁴⁵

An excellent example of this dynamic can be seen in the telephone services industry. U.S. policymakers long sought to get more competition in telephony. After initially changing

regulations to allow long-distance companies such as MCI and Sprint to enter the market, they enacted the 1996 Telecommunications Act, which forced open local markets to other telephone companies. Not only did this regulatory-mandated competition fail (e.g., the collapse of the competitive local exchange market in the early 2000s), it was the development of cellular and Internet telephony (and more recently, video chat and messaging apps) that disrupted the circuit-switched telephone business and created intense competition.⁴⁶ Indeed, disruption is the most important source of competition. Firms' dynamic capabilities enable them to compete disruptively.⁴⁷

Remarkably, as competition policy has traditionally approached competition as being a determinant of innovation, the alternative and most fundamental causal relationship commonly remains overlooked. This relationship between competition and innovation considers and empirically demonstrates that innovation is the consequence of competition and, more fundamentally, the engine of competition.

A dynamic perspective of antitrust enforcement would protect the firm's dynamic capabilities and the entrepreneur's incentives to generate and appropriate innovation benefits.

A dynamic perspective to competition would pursue innovation as an explicit objective and preserve it as a fundamental prerequisite for competition. Indeed, innovation is a double-edged sword in relation to competition: Innovation infers, as well as follows, from the competition. Consumer benefits correspond to a relatively more medium-term objective—namely, less than five years. Innovation corresponds to a longer-term perspective—namely, five years and beyond. Innovation as an objective for antitrust enforcement ensures innovation incentives are preserved so the process of creative destruction is fostered, rather than being deterred.

Dynamic Antitrust for Consumer Benefits

Dynamic antitrust enforcement would primarily ensure that enforcement does not generate more consumer harm than good in the short term. As such, evidence of consumer harm by anticompetitive practices constitutes a necessary, albeit insufficient, trigger for antitrust analysis by agencies of a particular behavior.

The consumer welfare standard of the Chicagoans, once deprived of its mathematical calculus, may be helpful. Therefore, instead of attempting to maximize consumer welfare with antitrust enforcement, it would be more appropriate to ensure that antitrust enforcement intervenes only when there is evidence of consumer harm in the market. To foster consumer benefits, dynamic antitrust enforcement would adopt a more realistic approach to minimizing consumer harm rather than taking an idealistic approach to maximizing consumer welfare.

Indeed, maximization models imply that markets exist in a static equilibrium. Also, what is the objective of maximization? Is it local welfare, national welfare, regional welfare, or global welfare? Perhaps it would be more appropriate to use the consumer welfare standard from a reverse perspective, one that illuminates negatively, helping avoid creating consumer harm. Instead of attempting to maximize consumer welfare, antitrust enforcers should ensure that consumer harm is minimized or absent before envisaging antitrust interventions.

Consumer harm arises in the most straightforward cases of fraudulent, deceptive, and misleading information being provided to consumers. In that regard, consumer harm enforcement may constitute a general line of injury that applies whenever specific consumer protection rules are absent. Consumer harm may take place when companies conceal information legitimately expected by consumers.

A firm may be held responsible for harm caused to its consumers due to exclusionary practices impeding a more efficient rival from competing. Thus, the “as-efficient rival” test must remain the primary standard of analysis of unilateral practices.

Consequently, as a necessary-but-insufficient condition for triggering antitrust interventions, the consumer benefits’ objective of the dynamic perspective to antitrust constitutes a quasi-regulatory impact assessment before a fully-fledged antitrust analysis. Antitrust enforcers must indeed question themselves, in light of reported conduct, whether there is evidence of consumer harm. If, after careful analysis, antitrust enforcers do not find any consumer net harm—meaning harm more significant than the associated consumer benefits—the antitrust enforcers must end the investigative phase and close the antitrust investigations so that resources can be better allocated to more severe cases.

In other words, the objective of consumer benefits shall constitute the first stage of antitrust analysis. Failure to meet the necessary evidence of consumer harm shall close antitrust investigations. Success in finding evidence of consumer harm may qualify for a fully fledged antitrust investigation wherein a *stricto sensu* dynamic antitrust perspective occurs. In that second and final stage of antitrust analysis, short-term potential consumer harms are weighed against longer-term dynamic benefits for consumers through innovation and technological progress.

Dynamic Antitrust for Social Innovation

Innovation-based antitrust means that innovation should be inherent to the antitrust analysis conducted by antitrust enforcers and ultimately reviewed by the courts. Innovation-based antitrust sets innovation as the paramount objective of antitrust enforcement.

Nothing more powerful than innovation can deliver progress. Our lives and society have been fundamentally improved over the last 100 years because of innovation: jet airlines, biopharmaceuticals, electronic communication, automation, and vastly more. It is innovation that makes society move forward along the trajectory of progress—and it is progress that effectively addresses societal ills. Moreover, changes in innovation force individuals to openness, tolerance, and adaptability, constituting the pivoting force behind a society’s success.⁴⁸ Therefore, social changes brought about by innovation constitute formidable shortcuts in the road to improving human well-being.

Nothing more potent than innovation can deliver economic benefits. Innovation is responsible for approximately 80 percent of per capita income growth in developed nations.⁴⁹ The gales of creative destruction usher in incommensurable economic benefits when the purchasing power of households improves—once unaffordable items become affordable, or even free of charge. Innovation enables individuals to improve their economic conditions by making basic needs more affordable, thus opening up a world of opportunities.⁵⁰ Seventy-five years ago, for example, air conditioning was a luxury; today it is a necessity.

Most innovations are social innovations because society is, to paraphrase Schumpeter, disrupted not at its margins but at its core, on the very nature of society. Consequently, antitrust must pursue social innovation as its core objective.⁵¹ Otherwise, the growth in prosperity will cease, and change will halt. But both prosperity and social change are at the heart of any capitalist society's success. Therefore, dynamic antitrust must avoid stifling innovation and ensure that antitrust interventions only occur when innovation incentives are unduly distorted.

Innovation represents an economic imperative for poverty alleviation, for individuals' economic welfare, and for entrepreneurial opportunities thereby propelled. Innovation ought not to be discarded as the most effective engine for prosperity.

In conclusion, the objective of dynamic antitrust as an innovation-based competition policy must be the short-term absence of consumer harm combined with the long-term preservation of innovation incentives. To attain this dual objective inherent to dynamic antitrust, it is essential a set of enforcement principles be adopted.

THE IMPLICATIONS OF DYNAMIC ANTITRUST

An innovation-driven antitrust—or dynamic antitrust—is urgently needed.⁵² The foundational principles of dynamic antitrust enforcement are threefold: enforcement principles, institutional principles, and international principles.

Enforcement Principles

Perfect competition, however flawed, has remained competition policies' *raison d'être*.⁵³ Good antitrust enforcement appears to operate according to an imperfect, disequilibrium pattern. Antitrust enforcement principles must be realistic and based on realistic models. Antitrust enforcers must adapt to market realities, not vice versa.

In this regard, a Schumpeterian view of competition enforcement revolves around five principles. First, traditional antitrust enforcement tools exaggerate the role of market structure as being reminiscent of the SCP paradigm.⁵⁴ Second, we need an evolution of competition law enforcement toward a more principled and dynamic approach. Third, antitrust enforcement must dedicate itself to its primary and original intent—namely, being a tool that helps preclude cartelization and conspiracies. Fourth, unilateral conduct often generates efficiencies and may cause innovative responses and constraints from competitors. Fifth, greater scrutiny of horizontal mergers can be deemed legitimate to prevent undue monopolization at the expense of innovation. Each of these enforcement principles of dynamic antitrust is successively scrutinized.

The Tools of Dynamic Antitrust

Market Studies as Substitute to Market Definitions

Market definition is central and unique to antitrust. Central because it is often considered the first stage of analysis before the antitrust liability of the firm can be assessed.⁵⁵ It is unique to antitrust because no other professions but antitrust scholars and enforcers *define* markets.⁵⁶ In this regard, we define the relevant market for antitrust purposes only since such a definition may be fruitless to any other social-science disciplines.⁵⁷ What is the scientific and logical validity of an intellectual exercise for which no implication outside its immediate purpose can be drawn? In other fields, when examining markets, we rarely (if ever) define markets—we study them.

The implications cannot be underestimated. Market definition rules suffer from a self-contradicting rationale: Relevant markets are defined based on firms' market power inferences.⁵⁸ These firms are chosen for depicting some market power, thereby anticipating the conclusion of the market definition exercise. Firms' market power can only be inferred based on market shares. Therefore, the argument is circular, and the market definition exercise becomes a dead-end, as it intends to find the very assumptions upon which it already operates.⁵⁹ In other words, market definition seeks evidence of market power while having to assume that market power exists in the first place. Market shares follow from the market, and are thus defined based on market power assumptions—or rather, they prove market power, which was the baseline assumption at the start of the market definition exercise. Such an exercise represents nothing but a confirmatory process in search of economic/econometric justifications.⁶⁰

Market definition rules constitute a fruitless and circular exercise, relying on excessively static, corseted models that fail to depict business realities.

The problem with the structuralist angle suggested by the market definition rules is it makes it hard to accurately assess competitive constraints outside the prevailing equilibrium model.⁶¹ Potential entry as a plausible and fact-based exercise remains ancillary, if not absent, to the market definition exercise. Equally, potential competition as a disciplining force toward market players constitutes not an inherent stage of analysis but rather an analytical option.⁶²

In contrast to the static analysis suggested by current market definition rules, a dynamic view of competition would refrain from embracing a structuralist analysis because market shares rarely represent market power, given the often-flawed definition of relevant markets. Also, an increase in market share may denote superior performance. Market consolidation can result from adjacent markets' competitive constraints or disruptive innovations leading to a transitory market leadership related to first-mover advantage.

Also, an increase or decrease in a firm's market power does not necessarily indicate greater competitive strength. An increase in market power can result from an increased mark-up, which, in turn, may result not from the firm behaving as a price-taker but rather from the increase in quality from past or expected investments to innovate and nurture dynamic capabilities. In reverse, a price decrease may suggest an increase in market power, as a company's large scale may enable it to charge lower prices.⁶³ In short, market power as determined by price changes—and, more generally, market definition as relying excessively on prices—can pave the way for flawed conclusions. Today's economy further bolsters such conclusions, given that prices increasingly become either invisible to consumers—namely, ad-funded business models with no upfront consumer fees—or represent an increasingly secondary criterion for determining competition.

For these reasons, market definition rules must be abandoned without qualification. Market definition already fails to occur in antitrust proceedings when antitrust enforcers find it too difficult to reach their stated goals. Rather than arbitrarily resorting to market definitions only when they offer the conclusions the enforcers want to reach, it would be more coherent and less arbitrary to abandon them altogether as a matter of principle. Market definitions start from flawed assumptions and lead to erroneous results. They provide nothing but a basis for self-

reinforcing beliefs, forcing facts to fit into the theoretical exercise or discarding relevant facts that may not fit.

The discipline of antitrust should rely on market studies, not definitions. Market studies would enable antitrust enforcers to dive deep into particular markets' functioning while examining adjacent, tied, and sub-markets. Market studies or market investigations are designed to accumulate information, knowledge, and analysis regarding the functioning of the markets. They do not investigate a particular company, but rather analyze the competitive forces of a particular industry. This analysis takes place at the industry level rather than at the market level. It provides the necessary information, detached from investigative functions, for qualitative indicators to subsequently be used for investigative phases, should anticompetitive practices be discovered. Market studies rely on qualitative indicators and not on the quantitative indicators of market definition rules.⁶⁴

Markets must not be defined; they must be studied.

Market studies would better integrate threats and possibilities of market entry by competitors, and better represent dynamic competition in the long term. They would better understand the investments and their necessary returns, which require imperfect competition for innovation to materialize.

Principled Antitrust—the Importance of the Rule of Law

A dynamic approach to antitrust enforcement would reinforce the essential role of the rule-of-law principles and the fundamental role of courts in the necessary judicial review of antitrust decisions.

Legal Certainty for Dynamic Competition

First, the rule-of-law principles require enhanced legal certainty that provides for firms' dynamic capabilities and enables firms to engage in the rivalrous process. Indeed, legal uncertainties and unintelligibility generate risk-averse attitudes that prevent innovative products and services from being produced. The legal loopholes and regulatory vagueness constitute the basis for market uncertainties. This entrepreneurial risk prevents more aggressive competition from taking place and a bolder, innovative culture to emerge. The principles are pivotal to the ability of our institutions to create growth. To generate minimal uncertainty constitutes the fundamental premise on which competition through innovation can thrive.

Antitrust rules must retain their generalities and principle-based approach in order to be adapted and avoid accusations of being obsolete. Simultaneously, antitrust rules need a case-by-case application of the very meaning of these rules. Therefore, the role of the courts remains crucial. Nothing can prevent courts from judicially reviewing and elaborating, in an evolutionary process, antitrust enforcement. The dynamic nature of antitrust enforcement also pares down to the beautiful work of the court. Precedents are not legal constraints; they are the basis for an evolutionary interpretation of antitrust laws.

Additionally, soft law instruments (non-binding agreements that could potentially morph into regular law) must remain, together with general statutory rules and case law, the principal instruments aimed at deciphering the administration's stance concerning several particular

practices. Without the need to resort to legally binding ex ante rules, soft law instruments also participate in the necessary evolutionary formation of antitrust enforcement—an inherent trait of dynamic antitrust.

Antitrust in Courts as a Matter of Principle

Judicial review is instrumental to the efficiency of antitrust laws. It underpins the ability of these laws to govern antitrust dynamically. Some populists seek to take antitrust away from the courts, or, alternatively, to prevent antitrust cases from being judicially appealed. These gross encroachments into the rule-of-law principles need to be seen for what they are: dangerous calls to undermine the democratic foundations of our society. These calls would encroach upon every litigant’s constitutional right to access justice and seek judicial remedy. The role of the judge must, on the contrary, be preserved as the ultimate arbitrator of antitrust cases. The need to preserve the role of the judge is twofold: basic principles of the rule of law and the fundamental right to access courts.

Also, the evolutionary perspective inherent to judge-made law enhances the efficiency of the law thanks to incremental improvements. Beyond the mere hypothesis of the efficiency of common law due to its evolutionary process, judge-made law allows for a trial-and-error process. It spurs a debate of ideas through the multiplication of cases, increasing society’s knowledge regarding specific cases. In complex matters such as antitrust cases, “learning by doing” being inherent to the evolutionary aspect of judge-made law is a quality, not a pitfall, of the law.

A case-by-case judicial approach proves to be a better approach to complex cases than indiscriminate, broad regulatory compliance rules that are subject to little or no judicial review. To further develop this dynamic approach, the rule of reason must be better protected as a legal standard that is more respectful to the dynamic view of competition.

Rule of Reason for Dynamic Antitrust

Per se prohibitions must be abandoned, given the need to engage in a case-by-case analysis of each litigated behavior’s pro- and anticompetitive effects.⁶⁵ Tying agreements (or tie-in sales), horizontal group boycotts, ancillary horizontal market division, and even horizontal price fixing, for example, are currently per se prohibited. A discussion of both the pro-competitive effects and the balancing exercise inherent to the rule of reason would help better distinguish the practices that are improving competition and innovation overall from those that deplete competition and innovation.

Per se presumptions and prohibitions must be abandoned, as they prevent judges from conducting a necessary balancing exercise between pro- and anticompetitive effects of firms’ conduct.

The objective is to ensure the pro-efficiency and pro-innovative effects are lower than the positive effects in order to enable the sanctioning of conduct.⁶⁶ Antitrust enforcement requires a balancing exercise between positive and negative consequences for every conduct. In light of legal and economic evidence submitted, only a judicial authority can embark on this necessary balancing exercise.

The balancing exercise inherent to judicial pragmatism ought to be preserved by a generalization of the rule of reason over per se presumptions.⁶⁷ The rule of reason must be generalized and

applied in antitrust cases to comply with both rule of law principles and in-depth legal and economic analysis.

Consistent Evidentiary Standards for Dynamic Antitrust

Recent antitrust reform proposals, both in the EU and the United States, calling for reversing the burden of proof constitute unreasonable proposals to undermine the legal certainty and the regulatory environment of entrepreneurs. Reversing the burden of proof so that entrepreneurs may have to demonstrate the absence of their violation of antitrust rules in the first place, without antitrust enforcers having to bring forward sufficient evidentiary elements, shall constitute massive innovation deterrence. Reversing the burden of proof would also mean mergers would be prohibited unless proven beneficial by the private parties.

Indeed, the constantly insecure regulatory environment within which entrepreneurs would evolve may generate risk-averse attitudes that contradict the culture inherent to the entrepreneurial adventure.

Also, the reversal of the burden of proof may constitute a gross violation of constitutional rights. It would single out antitrust cases (wherein such a reversal would take place) as opposed to other areas of law (where no such reversal would occur).

The reversal of the burden of proof undermines the principle of liberty in favor of a principle of presumed guilt. There can hardly exist a more substantial deterrent to innovation.

Beyond the imperative to retain the burden of proof on antitrust enforcers to demonstrate possible antitrust violations, the standard of proof must not be lowered for superficial reasons. Some argue that antitrust enforcers should find antitrust violations with decreased evidentiary thresholds regarding the standard of proving a violation because of the complexity of today's economy.⁶⁸

These claims are misguided: The economy's complexity has always come together with the refinement and expertise of antitrust enforcers. Indeed, antitrust enforcement adapts to the economy, and antitrust enforcers have traditionally brought forward complex cases in light of the technology and complexity of their times. Antitrust enforcers could investigate railroad companies more than a hundred years ago inasmuch as they can investigate a social media platform today. Tools adapt as the situation evolves.

The standard of proving responsibility must be preserved; otherwise, such a slippery slope may pervert not only antitrust enforcement but also any areas of law wherein the difficulty for administrative agents to find guilt may constitute the basis of, not of the absence of responsibility for, the lowered standard of proof. In other words, the agencies may almost always win cases, as seemingly advocated by Neo-Brandeisians.

Consequently, dynamic antitrust would enhance the rule-of-law principles and strengthen the role of the courts in the evolutionary process of antitrust laws. Dynamic antitrust enforcement would generalize the rule of reason with traditional evidentiary standards. These simple but fundamental premises upon which rests the rule of law are foundational principles for dynamic antitrust enforcement.

Enforcement Focus on Cartels and Collusive Practices

Cartels and collusive practices are infringements to the process of competition that thwart innovation. Indeed, by securing monopoly rents and enforcing naked restrictions on trade, cartels are illegally designed to harm consumers and reduce the level of innovation. Profits are no longer invested in research and development projects to market innovative ideas and solutions, but rather become sources of unproductive monopoly rents.

In this regard, cartels and collusive practices undermine the core values of our society, such as rewarding entrepreneurial merits, arduous work, and social progress via innovations. Consequently, these cartels must be prosecuted, investigated, and sanctioned.

Too much antitrust enforcement has focused on unilateral conduct, although the harmfulness thereof remains more questionable. Therefore, the shift away from allocating resources to tackle cartels and collusive practices toward unilateral conduct that may benefit society constitutes a double impairment of a dynamic view of competition. Beneficial conduct leading to further innovation may be sanctioned, while harmful conduct leading to lower innovation gets a pass. This state of affairs must be addressed and corrected through a strong focus on cartels and collusive practices by antitrust enforcers.

One qualification for more robust enforcement against cartels and collusive practices as a matter of dynamic antitrust enforcement principle is innovation-based cooperation must be addressed through a rule of reason so legitimate justifications can be effectively heard.⁶⁹ All too often, antitrust reflectively assumes that firm collaboration is anticompetitive when in fact it is often pro-innovative. Indiscriminate prohibition ought to be avoided in favor of a reasonable public intervention. Schumpeter indeed considered,

It is certainly as conceivable that an all-pervading cartel system might sabotage all progress as it is that it might realize, with small social and private costs, all that perfect competition is supposed to realize. This is why our argument does not amount to a case against state regulation. It does show that there is no general case for indiscriminate “trust-busting” or for the prosecution of everything that qualifies as a restraint of trade. Rational as distinguished from vindicative regulation by public authority turns out to be an extremely delicate problem which not every government agency, particularly when in full cry against big business, can be trusted to solve.⁷⁰

Therefore, in that regard, a generalized rule of reason and an enhanced role of the courts, as well as a rebalancing of the views toward inter-firm cooperation, remain essential.⁷¹

Regulatory Self-Restraint on Unilateral Conduct

Antitrust economics shed light on the efficiency rationale of some unilateral conduct. The complexity of assessing the effects of unilateral practices in terms of efficiency causes legitimate caution against unreasonable prohibitions of several novel business practices. Antitrust enforcers used to revert to the monopoly explanation, under specious grounds, whenever they faced novel business practices.⁷²

Today, practices that may be prohibited for some companies are authorized for others. Self-preferencing is randomly blamed or praised. Data-sharing is sought after while data privacy is regularly invoked. Inconsistencies regarding the antitrust treatment of unilateral practices

suggest a sensible regulatory humility, especially in light of novel business models and innovative products and services.

Superior foresight and dynamic capabilities can lead entrepreneurs to disrupt and outcompete rivals to such an extent the industry structure gets reshuffled. Markets are created out of technological advances. The dynamic competition approach acknowledges that dynamic capabilities shape industry structure—it is neither a negative outcome nor a proof of anticompetitive conduct.⁷³ Exclusionary conduct cannot, and ought not, be inferred from a change of industry structure unless the enforcers want the gales of creative destruction to appease and the dynamic capabilities to weaken.⁷⁴

Exploitative abuses—namely, excessive prices or predatory pricing—appear to be, if ever-present, largely transitory. Excessive pricing and predatory pricing are the conduct most prone to false positives. Excessive prices may be, absent legitimate entrepreneurial rents or recoupment efforts, increased prices to enable innovations. Also, higher prices may create incentives for competitors to disrupt incumbents. The lower the entry barriers, the higher the entrepreneurial rents can be enjoyed without innovation deterrence during a transitory period.

More generally, excessive pricing and predatory pricing increasingly represent arbitrary claims, given the breadth of zero-priced markets and difficulty comparing respective costs of different firms. Consequently, dynamic antitrust enforcement would assess exploitative conduct with the necessary caution and in light of the firm’s dynamic capabilities and the actual and potential competitive constraints exerted to discipline the incumbent’s conduct.

The as-efficient rival test must remain the predominant test for assessing exclusionary practices, as the competitive process offers a dynamic selection of companies wherein less-efficient and innovative rivals lose. This constitutes competition on the merits, not unfair competition.

In other words, administrative self-restraint must govern antitrust enforcement toward unilateral conduct due to the complexity of these practices in terms of innovation effects. An increase in market power may result from successful products being protected by intellectual property rights. In contrast, contractual restrictions may enable the provision of free services in exchange for access to strategic assets. Also, a firm’s dynamic capabilities analysis is essential to concluding that an investigated conduct is anticompetitive. In other words, if a company develops dynamic capabilities to further compete with a stronger competitor, the conduct enables fiercer competition via innovation, even though such conduct may constitute vertical restraints.

Administrative self-restraint may not suggest a regulatory carte blanche. Instead, it emphasizes assessing a firm’s dynamic capabilities and analyzing unilateral conduct through a consistent and well-accepted standard: the “as-efficient rival test.” This test requires rivals to be as efficient as the incumbent in order to allege an anticompetitive foreclosure by the incumbent: Rivals exhibiting inferior efficiency may legitimately be harmed by the competitive process. Exclusionary conduct can be the channel through which displeased rivals find a rent-seeking venue in which to compete against more innovative, fiercely disruptive entrepreneurs that have mastered asset orchestration in order to translate a marginal technological or organizational advance into a core disruptive innovation.⁷⁵

Exclusionary conduct can lead to anticompetitive exclusion (i.e., exclusion outside the competitive process) only if the excluded rival is as efficient as the exclusionary firm, as the exclusion of inefficient rivals may never constitute anticompetitive conduct, but rather, the very process of competition via innovation.

The competitive process prevents consumers from reaping the benefits of the less-efficient market outcomes (i.e., ones with zombie firms artificially insulated from competition by antitrust preservation). The as-efficient rival test ensures that efficiency gets passed on to consumers. In terms of antitrust implications, it guarantees that antitrust action occurs only when consumers are harmed by incurring the opportunity costs of foregone benefits delivered by more efficient rivals, and only when absent innovation benefits. The test requires the necessary evidentiary elements.

Consequently, dynamic antitrust embraces general administrative self-restraint concerning unilateral practices (given the efficiency and innovation rationale behind most conduct) and detailed analysis through the lens of the as-efficient rival test (given the risks to overprotect inefficient rivals through rent-seeking litigations).

Innovation Defenses in Merger Cases

Mergers and market consolidation are often ways to ensure external growth, given the difficulty of achieving internal growth. Still, they are also a way to generate economies of scope, gain economies and scale, and obtain critical innovation capabilities. This can generate firm consolidation and market concentration, and also enable further competition. More aggressive competition through scale economies and organizational synergies enables the merged firms to compete more effectively with an incumbent, or alternatively, to anticipate the entry of a stronger competitor.⁷⁶

Conglomerate and vertical mergers often source considerable efficiencies so that a merged firm can more effectively compete with an incumbent or change its practices, such as engaging in global competition.⁷⁷ Conglomerate mergers and vertical mergers are often pro-competitive and must be assessed from qualitative rather than econometric indicators.

Under dynamic antitrust, horizontal mergers may legitimately face increased scrutiny, with the alternative between the cartel and the horizontal merger often being very slim. Consequently, the heightened scrutiny for cartels and collusive practices shall be naturally complemented with heightened scrutiny in horizontal mergers. Again, no per se prohibition should ever be imposed, as defendants must, in order to be heard, access courts as a matter of principle. Regardless, horizontal mergers shall be treated more stringently than conglomerate or vertical mergers when innovation and efficiency rationales are often greater than any restricting effects.

Dynamic antitrust enforcement toward merger cases suggests clearer and stricter rules to allow for innovation defenses. Unlike efficiency defenses, innovation defenses in merger cases may explicitly invoke dynamic capabilities-building of the merging firms, the intellectual property rights involved in the industry, and any other innovative medium-term objectives.⁷⁸

In addition, firms' global and national competitiveness defense concerns would be more strongly incorporated into dynamic antitrust. Dynamic antitrust cannot live in a textbook-idealized view of the world, ignoring that some nations, especially China, create state-backed monopolies that intentionally target foreign competitors. A dynamic approach to merger cases would avoid inward-

looking naivety of static analysis within national boundaries. Dynamic antitrust of merger cases would better assess global market dynamics, especially the credibility of entry by powerful competitors as a valid justification for industries' consolidation by anticipation.

These enforcement principles would enable dynamic antitrust to materialize in simple, clear, and innovation-based rules and practices. Antitrust law must be embedded in the rule-of-law principles and geared toward innovation-based enforcement. Dynamic antitrust must embrace and cherish the evolutionary process of the market with an evolutionary process of forming antitrust laws. Consequently, a principled approach to innovation may better conciliate the relationship between competition and innovation. Enforcement principles of dynamic antitrust must nevertheless be engrained with institutional principles so that a long-term vision, insulated from party politics, may emerge for the benefit of consumers, entrepreneurs, and, more generally, society.

Institutional Principles

The institutional principles of dynamic antitrust revolve around three broad, easily implementable principles:

1. Avoidance of political meddling into antitrust enforcement;
2. Enhanced independence of the antitrust authority; and
3. Avoidance of confirmation bias.

No Short-Term Political Meddling Into Dynamic Antitrust Enforcement

Politics is inherently short-term and voter oriented. It is prone to decisions that discount efficiency and innovation rationales. Worse, populism discards longer-term benefits and proper economic incentives for catchy slogans and general demagoguery. Both are alien to antitrust in general, and to dynamic antitrust in particular.

Dynamic antitrust focuses on the long term and pays due attention to the invisible aspects of the economy (i.e., incentives, opportunity costs, capability-building). Additionally, antitrust has become so complex that it requires strong expertise capable of comprehending the principles and practices of antitrust. Both aspects of antitrust preclude dynamic antitrust from being subject to popular votes and electoral circumstances. Antitrust undoubtedly contains a technocratic element—and one must not be shy about that element. Antitrust policy must remain administrative, with the judicial working with the legislative in exercising self-restraint, in order for the evolutionary process of the law to take place.

Consequently, political interference in antitrust enforcement should be avoided, or at least minimized. As such, antitrust authorities should not be pressured by politicians, nor should politicians interfere with antitrust agendas or investigations. Therefore, the creation of an antitrust position in the Biden White House, which has the potential of undermining the independence and autonomous work of antitrust agencies, represents the very opposite of what ought to happen. It would further instill short-termism in antitrust enforcement, whereas long term, as advocated by dynamic antitrust, should be the guiding principle.

Autonomization of Dynamic Antitrust Enforcement

Not only should political meddling be avoided as an essential condition to developing both the expertise and the long-term policy of antitrust enforcement, but so should antitrust authorities be further depoliticized.

Such depoliticization would mean enhanced independence and increased autonomy for antitrust enforcers, as they should be given all the power necessary for their functions to be performed in the most effective way without recourse to other administrative authorities.

More precisely, this would suggest, for instance, that one single antitrust authority should be in charge of the federal antitrust enforcement in the United States. Because of its administrative independence and professional expertise, the Federal Trade Commission (FTC) must become the single independent authority enforcing antitrust at the federal level. Powers to the FTC must be extended so that it can achieve its mission independently and autonomously. Also, an increase in resources for the FTC justifies the rationalization of all federal antitrust resources to the agency. Equally, the European Union will need to depoliticize its antitrust enforcement by making its DG-Comp a fully independent authority that's headed by an expert rather than a politician. It ought not to be accountable to political leaders concerning its decisions.

Administrative Organization for Dynamic Antitrust Enforcement

It is rare for antitrust investigations to be concluded prematurely due to lack of facts, lack of elements, or lack of anticompetitive conduct. On the contrary, most antitrust investigations seem to have their outcomes unsurprisingly predetermined. Antitrust enforcers are extraordinarily prone to confirmation bias, as they tend to find only what they were looking for in the first place. They rationally confirm their previous findings without sufficient distance from and objectivity about their own work. As an illustration, market definition rules epitomize confirmation bias. A firm selected as possibly enjoying significant market power will eventually be considered as definitely enjoying such power. Once this power is “found,” the antitrust violation will be inferred and ultimately confirmed internally such that an administrative decision can be issued against the company.

It makes sense that administrative organizations portray confirmation bias. The resources used in the first place can hardly be justified as not conducive to a definite result. Otherwise, the credibility of the institution as well as that of the officials may be undermined. Consequently, the opening of an investigation naturally leads to the finding of a violation which, in turn, is confirmed by higher management within the administrative organization.

Such confirmation bias not only enshrines possible errors into final decisions but also prevents an interdisciplinary, objective approach from taking place with fact-checked reviewers who may endorse a longer-term view or, at least, may have no stake in confirming an earlier decision from a lower rank within the administration. In other words, the confirmation bias reinforces the static view of competition with similar personnel, confirming colleagues' decisions in order to increase the organizational efficiency of the administration.

A dynamic view of competition should reduce confirmation bias within the organization of the administration. Each critical stage of the analysis should be thoroughly checked and reviewed by individuals who have no particular interest in confirming the earlier decision. These stages pare

down to two fundamental stages: the investigative and prosecutorial stage, and the adjudicative stage.

The investigative and prosecutorial stage must be insulated from the adjudicative stage. Within the independent antitrust authority, the administration must organize two separate teams of individuals with different incentives. While the investigative and prosecutorial team must be designed such that it is incentivized to bring more cases and collect as much information as possible through market studies, the adjudicative team must have completely different incentives. It must act as a team of quasi-judges whose evidentiary standards are kept sufficiently high, who question facts, and hear both parties.

With a solid and clear separation between two teams, antitrust enforcement's confirmation bias can be minimized. Consequently, long-term considerations and arguments may better be integrated into the analysis of antitrust enforcement.

International Principles

Dynamic competition takes place at both the domestic and international level. With increased globalization trends, potential competition increasingly comes from foreign market players. Therefore, the extraterritorial effects of competition and antitrust enforcement prove to be a more familiar reality every day. Indeed, international mergers and cartels involve numerous antitrust authorities. Moreover, some nations, especially China, use antitrust as a mercantilist, industrial policy tool.

The extraterritorial effects necessitate stronger antitrust coordination internationally, but divergence on antitrust enforcement approaches requires stronger cooperation and regulatory convergence. This is imperative to avoiding legal uncertainty, hindrances to firms' internationalization processes, and risks associated with firms competing globally.

To lay down principles of international antitrust fosters the process of international competition wherein rivalries operate within legally predictable and similar rules.

Dynamic antitrust enforcement can only emerge should antitrust authorities develop an ambitious agenda of antitrust reforms. This means i) strengthening bilateral cooperation mechanisms, ii) restarting antitrust discussions within the World Trade Organization (WTO), and iii) cooperating on a transatlantic antitrust enforcement program.

Extraterritorial Enforcement for Dynamic Antitrust

Antitrust enforcement has primarily remained static and domestic. Despite the increasing face of global competition, competition rules have evolved absent substantial international cooperation. Indeed, international mergers are approved in some countries while rejected in others, thereby generating considerable regulatory costs together with an entrepreneurial culture of risk aversion. In that regard, some enforcers do not adapt to international competition and thus deter the possible growth of companies through these international mergers.

Equally, cartels are under-detected whenever they are of international scale due to the difficulty of gathering information, collecting evidence, and effectively prosecuting these harmful and costly practices.

Finally, the divergence of antitrust enforcement causes distortions in competition. Indeed, some practices may be considered legitimate in some countries and anticompetitive in others. Legal unpredictability thwarts innovation efforts, undermining the ability of firms to gain scale. It limits global competition because such regulatory divergences prevent the coming to the fore of global markets.

These are the market realities of today's companies that hamper market dynamics and, in turn, prevent dynamic antitrust enforcement from materializing. Against this background, antitrust authorities need to work more closely together, including by making available more information based on shared commitments. These commitments can either be soft law instruments (such as a memorandum of understanding) or legally binding rules included in international conventions.

Global Dynamic Antitrust

The vision of dynamic antitrust enforcement should progressively become the baseline antitrust standard throughout the world. Domestic antitrust policies are too often used as trade-distortive tools. Nations weaponize antitrust rules and enforcement at the expense of their rival competitors—and more generally, at the expense of global trade and innovation. Dynamic antitrust entails enhancing global innovation and trade beyond mere antitrust authorities' cooperation. Global antitrust rules ensuring that nations do not resort to antitrust enforcement as a distortive trade instrument require an enforcement mechanism wherein disputes can be raised and settled.

Indeed, it is of utmost importance that advocacy of dynamic antitrust enforcement take place in relevant international fora. The first and most relevant forum would be the International Competition Network (ICN). This forum remains useful, albeit considerably limited to its objective of designing soft law instruments. Equally, the Organization of Economic Cooperation and Development (OECD) provides for another useful forum. Nevertheless, both fora remain sensibly limited soft law instruments such as communications of shared practices. Global trade needs to be fostered with fairer, clearer, and dynamically approached rules of competition. This can only be achieved in the WTO.

The Working Group on the Interaction between Trade and Competition Policy (WGTCP) of the WTO needs to be reactivated. Inexplicably doused in 2004, the WGTCP provides an ideal place for designing principles that would ensure fair competition. It must lay down legally enforceable principles and rules that minimize distortions of competition for mercantilist purposes, and maximize competition on the merits. Indeed, when government-backed distortions of competition attain unparalleled scale, as seen nowadays, competition on the merits (let alone dynamic competition) cannot take place. Therefore, antitrust matters need to be intertwined with trade matters at the WTO level, and dispute resolution mechanisms must better integrate antitrust concerns and innovation objectives.

At the same time, U.S. antitrust officials must view their role as not simply managing U.S. antitrust regulation but working to prevent abuse by U.S. economic competitors, including China and Europe.

Transatlantic Dynamic Antitrust

If international antitrust at the WTO level is the ultimate goal, a more immediate and attainable objective must now be to agree on principles of dynamic antitrust in the two most critical

antitrust jurisdictions globally: the United States and the European Union. Because both markets represent almost half of the global wealth, and both jurisdictions have well-developed antitrust authorities and extensive experiences in this area, stronger cooperation between the United States and the EU on antitrust matters may provide greater legal predictability. It would also foster robust antitrust enforcement mechanisms and quicker information-sharing requests. Finally, a stronger transatlantic antitrust agenda would help converge the approaches toward the relationship between competition and innovation.

Dynamic antitrust enforcement across American and European markets implies that antitrust partnerships must be built on both procedural and substantive grounds. The procedural grounds cover enforcement mechanisms. And more crucially, substantive grounds cover the need to endorse a dynamic view of competition. Otherwise, economic protectionism and corporate nationalism would loom large. The United States and the EU need to share commitments on antitrust matters, not only for the benefit of fostering dynamic competition but also for a stepping-stone to a broader economic partnership between the two regions.

A transatlantic approach to antitrust enforcement might also include smaller antitrust jurisdictions such as Canada, the United Kingdom, Switzerland, and Norway in the process so the transatlantic partnership can be extended to like-minded economic partners.

CONCLUSION: REFORMING ANTITRUST FROM A DYNAMIC PERSPECTIVE

The current pendulum swing between Chicagoans' approach of the consumer welfare standard and the neo-Brandeisian approach of the so-called and undefined "public interest standard" is not only unhelpful but harmful. It is unhelpful because the static approach remains the prevailing analysis framework. It is harmful because neither approach embraces the dynamic view based on the nature of the evolutionary process of competition.

Antitrust enforcement needs to move beyond static competition and endorse dynamic competition. Antitrust enforcers can no longer overlook that innovation is the source of competition—not merely competition's unexpected and underestimated result. Consequently, the antitrust enforcement and institutional principles must be revamped based on a more realistic, less-formalized model.

Current neo-Brandeisian advocates support solutions consistent with the populist view of competition, and are strongly inspired by the German Ordoliberal school of thought.⁷⁹ This school is inherently static and dismissive of entrepreneurial gains as a motive for and result of innovation. It privileges the rivals' right to economic liberty and overlooks efficiency and innovation considerations. It assumes that the atomized market represents the most-achievable, perfect competition. Ordoliberalism is inherently a foe to the figure of the entrepreneur, who creates and innovates. Ordoliberalism is also inherently a foe to the enhanced scale of companies.

Against that background, the proposed alternative dynamic path is needed—a path based on creativity, innovativeness, disruptions, and evolutions. It is the path of the gales of creative destruction. Should we want to foster change, progress, and prosperity, it is the only path forward. Should we prefer to apply theoretical frameworks to unsettling facts and infer hasty conclusions at the expense of long-term growth and that cause consumer harm, prevailing static models may seem suitable.

Neo-Brandeisians, and their associated Ordoliberalism, cannot be the source of antitrust reforms. They contradict the essence of capitalism—entrepreneurial merits and scale with a large market—and cause great consumer harm and innovation deterrence.

The path of innovation-based antitrust, developed through a Schumpeterian perspective, must underpin the future principles of antitrust enforcement. Dynamic antitrust provides a beneficial path for consumers, meritorious companies, and the rate of innovation overall. Dynamic antitrust is the answer to today's antitrust dead-end. Dynamic antitrust ensures that the capitalist society preserves its ability to generate shared prosperity and collective progress.

About the Author

Aurelien Portuese (@aurelienportues) is director of Antitrust and Innovation Policy at ITIF. He focuses on the interactions of competition and innovation for antitrust purposes. Portuese holds a Ph.D. in law and economics from the University of Paris II (Sorbonne), an M.Sc. in Political Economy from the London School of Economics, and an LL.M. from the University of Hamburg. Portuese's forthcoming book, *Antitrust Populism*, will be published by Oxford University Press.

About ITIF

The Information Technology and Innovation Foundation (ITIF) is an independent, nonprofit, nonpartisan research and educational institute focusing on the intersection of technological innovation and public policy. Recognized by its peers in the think tank community as the global center of excellence for science and technology policy, ITIF's mission is to formulate and promote policy solutions that accelerate innovation and boost productivity to spur growth, opportunity, and progress. For more information, visit us at www.itif.org.

ENDNOTES

1. Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper Perennial, 2008) [1942], 83.
2. For instance, see Antitrust, Business Rights and Competition Subcommittee, Before the Committee on the Judiciary, U.S. Senate (March 22, 2000) (statement of Joel I. Klein, Assistant Attorney General, Antitrust Division of the U.S. Dept. of Justice), <https://www.justice.gov/archive/atr/public/testimony/4381.htm>, stating, “The more important that innovation becomes to society, the more important it is to preserve economic incentives to innovate. Timely and effective antitrust enforcement may be essential to preserving the kind of environment in which companies new and old, large and small, can be confident that there will be no anticompetitive barriers to bringing their new products and services to market.” More generally, the strongest account on how scale economies act as engines of innovation was articulated by Alfred D. Chandler Jr., *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, MA: Harvard University Press, 1990).
3. David J. Teece, *Dynamic capabilities & strategic management. Organizing for Innovation and Growth* (Oxford: Oxford University Press, 2009): 236 (writing that “the line of causation which is most commonly discussed runs only from competition to innovation...While this is undoubtedly correct, it does not recognize that innovation may impact competition and market structure. Nor does it suggest what type of market structure is desirable—only that competition can drive innovation.”)
4. David J. Teece, *Dynamic capabilities & strategic management. Organizing for Innovation and Growth* (Oxford: Oxford University Press, 2009): 236 (writing that “we don’t appear to have found a great deal of evidence that market concentration has a statistically significant impact on innovation, despite 50 years of research. The main take away is probably that this is not a useful framing of the problem, in that market concentration alone doesn’t stack up even theoretically (let alone empirically) as a major determinant of innovation.”)
5. See, for instance, William J. Baer and David A. Balto, “Antitrust Enforcement and High-Technology Markets,” *Michigan Telecommunication Tech Law Review*, 73 (1999): 73–90, <https://repository.law.umich.edu/cgi/viewcontent.cgi?article=1157&context=mttlr>; Richard J. Gilbert, *Innovation Matters. Competition Policy for the High-Technology Economy* (Cambridge, MA: MIT Press, 2020).
6. Schumpeter’s work rapidly sparked the essence of dynamic economics as a research program alternative to static models, as evidenced by Kuznets’s being inspired by Schumpeter as early as 1930, see Simon Kuznets, “Static and Dynamic Economics,” *American Economic Review*, 20(3) (1930): 426–441, <https://www.jstor.org/stable/1802588>, 427 (writing that “it was J. Schumpeter who, having presented the most abstract outline of static economics, indicated the problems which were not solved by it, and proceeded to solve them within a tentative system of dynamic economics. His writings influenced most the European economists who now express dissatisfaction with conventional economic theory.” It appears that such dissatisfaction waned down for static perspective to retain, until nowadays, its dominance in antitrust analysis.).
7. David S. Evans and Richard Schmalensee, “Some Economic Aspects of Antitrust Analysis in Dynamically Competitive Industries,” *Innovation Policy and the Economy*, 2 (2002), 1–49, <https://doi.org/10.1086/653753> (noting that “although static competition is rarely vigorous in new-economy industries, the key determinant of the performance of these industries is the vigor of dynamic competition—an issue that is ignored by traditional antitrust analysis. An explicit investigation of present and likely future dynamic competition is essential to sound economic analysis of Schumpeterian industries.”).
8. Robert D. Atkinson, “How Progressives Have Spun Dubious Theories and Faulty Research Into a Harmful New Antitrust Doctrine” (ITIF, March 2021), <https://itif.org/publications/2021/03/10/how-progressives-have-spun-dubious-theories-and-faulty-research-harmful-new>.

9. The SCP paradigm can be said to have been seminally debunked by Jean Tirole, *The Theory of Industrial Organization* (Cambridge, MA: MIT Press, 1988) which introduced partial equilibrium models. See also Eric Maskin, Jean Tirole, “A Theory of Dynamic Oligopoly, III. Cournot Competition,” *European Economic Review*, 31 (1987): 947–968.
10. Joe Kennedy, “Monopoly Myths: Are Markets Becoming More Concentrated” (ITIF, June 2020), <https://itif.org/publications/2020/06/29/monopoly-myths-are-markets-becoming-more-concentrated>.
11. David S. Evans, Richard Schmalensee, “Some Economic Aspects of Antitrust.” Analysis in Dynamically Competitive Industries,” *Innovation Policy and the Economy*, 2 (2002), 1–49, <https://doi.org/10.1086/653753> (noting, “In assessing the importance of those departures, antitrust analysis has traditionally paid particular attention to whether any firms have high market shares, since having a large number of relatively small firms is a key feature of perfect competition. However ... this statically competitive market structure cannot persist in many new-economy industries.”).
12. The idealization refers to the “fancied” considerations ascribed by economists to consumers, see Lawrence Abbott, *Quality and Competition. An Essay in Economic Theory* (New York: Columbia University Press, 1955), 91 (arguing, “If a consumer had perfect knowledge and perfect powers of analysis, and sought to maximize his satisfactions, he would select the products that could satisfy these basic wants with the greatest precision and economy. Then his derived wants would be optimal—and we could say that his subjective preferences were based wholly on ‘real,’ not ‘fancied,’ considerations. This amounts practically to saying that what people ‘ought to want’ is what they would want if they had unlimited time, resources, and expert assistance at their disposal to enable them to analyze perfectly their own tastes and all the available products.”)
13. The neo-Brandeisian antitrust populism most stringently opposes principles of dynamic antitrust. The Schumpeterian perspective inherent to the principles of dynamic antitrust sheds light on the nature and substance of the arguments of Neo-Brandeisians. Although the legal tradition of Neo-Brandeisians harkens back to Justice Louis Brandeis, their economic lineage can naturally be traced to Paul Sweezy. Sweezy’s Marxist ideas on monopolies most vividly opposed Schumpeter’s ideas of competition as illustrated by the famous Sweezy-Schumpeter debate at Harvard’s Littauer Auditorium in March 1947. See Paul Sweezy, *The Theory of Capitalist Development* (London: D. Dobson, 1946); Paul Sweezy and Paul A. Baran, *Monopoly Capital: An Essay on the American Economic and Social Order* (New York: Monthly Review Press, 1966). On the Schumpeter-Sweezy debate, see John Bellamy Foster and Paul Sweezy, “On the Laws of Capitalism,” *Monthly Review*, May 1, 2011, <https://monthlyreview.org/2011/05/01/on-the-laws-of-capitalism/>. On Sweezy’s view of Schumpeter’s idea of creative destructive, see Paul Sweezy, “Professor Schumpeter’s Theory of Innovation,” *The Review of Economic Statistics*, 25(1), 93–96, <https://www.jstor.org/stable/1924551>.
14. Joe Kennedy, “Monopoly Myths.”
15. Robert H. Bork, *The Antitrust Paradox. A Policy at War with Itself* (New York: Basic Books, 1978), 421 (who seminally lowered the importance of market structure in favor of firms’ conduct analysis because “antitrust forgot the importance of efficiency”); William E. Kovacic, “The Antitrust Paradox Revisited: Robert Bork and the Transformation of Modern Antitrust Policy,” *The Wayne Law Review*, 36 (1990), 1413–1471, <https://heinonline.org/HOL/P?h=hein.journals/waynlr36&i=1423,1417> (considering that “since 1890, no single scholarly work has exerted a greater influence than The Antitrust Paradox on the direction of antitrust policy.”).
16. Joan Robinson, “What is Perfect Competition?” *Quarterly Journal of Economics*, XLIX (1934): 114, <https://doi.org/10.2307/1883878>; Joan Robinson, *The Economics of Imperfect Competition* (London: Macmillan, 1933), describing how imperfect competition is inherent to entrepreneurial rents. For a discussion of market imperfections and market failures with respect to the inherently uncertain characteristic of innovation, see Jean-Luc Gaffard and Michel Quéré, “What’s the aim for competition policy: optimizing market structure or encouraging innovative behaviors?” *Journal of Evolutionary Economics*, 16 (2006): 175–187, DOI 10.1007/s00191-005-0014-0 (noting that “rivalry among firms does not result in excessive turbulence that hampers the viability of the process of change. This

requires appropriate (i.e. temporary and changing) market imperfections that prevent excessive and cumulative market disequilibria and hence sustain the growth process.”).

17. John Maurice Clark, *Competition as a Dynamic Process* (Washington, D.C.: The Brookings Institution, 1961), who first demonstrated not only that perfect competition is impossible, but most importantly that, should it be ever attainable, perfect competition is undesirable as a competition policy.
18. Central Intelligence Agency, *CIA World Factbook*. 2016, <https://www.cia.gov/library/publications/the-world-factbook/>.
19. Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper Perennial, 2008) [1942], 81.
20. *Ibid*, 105.
21. The implicit (or not) reference to perfect competition by Chicagoans derives from their focus on allocative and productive efficiencies. See David B. Audretsch, William J. Baumol, and Andrew E. Burke, “Competition policy in dynamic markets,” *International Journal of Industrial Organizations*, 19 (2001): 613–634, [https://doi.org/10.1016/S0167-7187\(00\)00086-2](https://doi.org/10.1016/S0167-7187(00)00086-2), 617 (“in general, economists have refrained from reliance on perfect competition as a guide to minimisation of welfare losses. Yet they have continued to think of it as the most illuminating model for guidance in policy formulation, partly because of their usual concerns about allocative inefficiency.”); The Chicago school remains, to a large extent, blended with the more structuralist Harvard school to form “a double helix,” see William Kovacic, “The Intellectual DNA of Modern U.S. Competition Law for Dominant Firm Conduct: The Chicago/Harvard Double Helix,” *Columbia Business Law Review*, 1(1) (2007):1–80, <https://heinonline.org/HOL/P?h=hein.journals/colb2007&i=7>, 13 (arguing that “the intellectual DNA of U.S. antitrust doctrine governing single-firm conduct today is not exclusively or predominantly a single strand of Chicago School ideas.”).
22. Such neglect reverts back to Bork’s seminal book, wherein he states that “in judging consumer welfare, productive efficiency, the single most important factor contributing to that welfare, must be given due weight along with allocative efficiency,” in Robert H. Bork, *The Antitrust Paradox. A Policy at War with Itself* (New York: Basic Books, 1978), 405.
23. Tim Wu, *The Curse of Bigness. Antitrust in the New Gilded Age* (New York: Columbia Global Reports, 2018) who rightly describes Chicago school as “triumphant” but calls for a “Neo-Brandeisian Agenda” ignoring the advances made by the Chicago school.
24. On the populism of the Neo-Brandeisians, see Robert D. Atkinson and David B. Audretsch, “Economic Doctrines and Approaches to Antitrust” (ITIF, January 2011), https://itif.org/files/2011-antitrust.pdf?_ga=2.133901902.1367017808.1615399576-1843805428.1610409627.
25. Robert D. Atkinson, “How Progressives Have Spun Dubious Theories and Faulty Research Into a Harmful New Antitrust Doctrine” (ITIF, March 2021), <https://itif.org/publications/2021/03/10/how-progressives-have-spun-dubious-theories-and-faulty-research-harmful-new>.
26. Innovative companies can, rather than being the problem, constitute a solution to hefty societal problems. See, for instance, Bahska Chakravorti, “Antitrust Isn’t the Solution to America’s Biggest Tech Problem,” *Harvard Business Review*, October 2, 2020, <https://hbr.org/2020/10/antitrust-isnt-the-solution-to-americas-biggest-tech-problem> (how tech companies can help address the COVID-19 crisis).
27. For a more detailed dichotomy of the approaches to antitrust, see Robert D. Atkinson and David B. Audretsch, “Economic Doctrines and Approaches to Antitrust” (ITIF, January 2011), https://itif.org/files/2011-antitrust.pdf?_ga=2.133901902.1367017808.1615399576-1843805428.1610409627 (where the “innovation school” with its Schumpeterian perspective to competition best corresponds to what we refer to as “dynamic antitrust”; Aurelien Portuese, “Beyond Antitrust Populism: Towards Robust Antitrust,” *Journal of Economic Affairs*, 40(2) (2020) 237–258, <https://onlinelibrary.wiley.com/doi/full/10.1111/ecaf.12401>; Aurelien Portuese and Joshua Wright, “Antitrust Populism: Towards a Taxonomy,” *Stanford Journal of Law, Business & Finance*, 131 (2020), <https://heinonline.org/HOL/P?h=hein.journals/stabf25&i=137>; Barry C. Lynn and Phillip Longman,

- “Populism With a Brain,” *Washington Monthly*, June/July/August 2016, <https://washingtonmonthly.com/magazine/junejulyaug-2016/populism-with-a-brain/> (stating notably, “What would a True Populist do today? In addition to prohibiting discrimination ... and banning vertical integration ... a True Populist would follow Roosevelt’s lead.”); Matt Stoller, “How Democrats Killed Their Populist Soul,” *The Atlantic*, October 24, 2016, <https://www.theatlantic.com/politics/archive/2016/10/how-democrats-killed-their-populist-soul/504710/>; Sandeep Vaheesan, “The Evolving Populisms of Antitrust,” *Nebraska Law Review*, 93(2) (2014) 370–428, <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1735&context=nlr>; Carl Shapiro, “Antitrust in a Time of Populism,” *International Journal of Industrial Organization*, 61 (2018) 714–748, <https://faculty.haas.berkeley.edu/shapiro/antitrustpopulism.pdf>; Barak Orbach, “Antitrust Populism,” *NYU Journal of Law & Business*, 14(1) (2017), 1–25, <https://heinonline.org/HOL/P?h=hein.journals/nyujolbu14&i=7>; Leon B. Greenfield, Perry A. Lange, and Nicole Callan, “Antitrust Populism and the Consumer Welfare Standard: What Are We Actually Debating?” *Antitrust Law Journal*, 83 (2020): 393–428, <https://heinonline.org/HOL/P?h=hein.journals/antil83&i=405>.
28. Arthur M. Schlesinger Jr., *The Cycles of American History*, Amazon.com: Books, <https://www.amazon.com/Cycles-American-History-Arthur-Schlesinger/dp/0395957931>.
 29. Robert H. Bork, *The Antitrust Paradox. A Policy at War with Itself* (New York: Basic Books, 1978); William E. Kovacic, “The Antitrust Paradox Revisited: Robert Bork and the Transformation of Modern Antitrust Policy,” *The Wayne Law Review*, 36 (1990), 1413–1471, <https://heinonline.org/HOL/P?h=hein.journals/waynlr36&i=1423>; Daniel A. Crane, “A Premature Postmortem on the Chicago School of Antitrust,” *Business History Review*, 93(4) (2019) 759–776, <https://doi.org/10.1017/S0007680519001193>; Aurelien Portuese and Joshua Wright, “Antitrust Populism: Towards a Taxonomy,” *Stanford Journal of Law, Business & Finance*, 21(1) (2020) 131–181, <https://heinonline.org/HOL/P?h=hein.journals/stabf25&i=137>; Aurelien Portuese, “Beyond Antitrust Populism: Towards Robust Antitrust,” *Economic Affairs*, 40(2) (2020): 237–258, <https://doi.org/10.1111/ecaf.12401>; Barry Lynn, *Liberty from All Masters; The New American Autocracy vs. the Will of the People* (New York: St Martin’s Press, 2020); Tim Wu, *The Curse of Bigness. Antitrust in the New Gilded Age* (New York: Columbia Global Reports, 2018); Lina Khan, “The New Brandeis Movement: America’s Antimonopoly Debate,” *Journal of European Competition Law & Practice*, 9(3) (2019):131–132.
 30. Quality as a parameter to competition and the inadequacy of the present competitive ideal have long been recognized, yet overlooked, and hack back to Lawrence Abbott, *Quality and Competition. An Essay in Economic Theory* (New York: Columbia University Press, 1955), 23 (who eloquently recapped the economics disdain for quality consideration as following: “[p]rice theory thus became the core of economics.... As mathematical tools of analysis have been elaborated, economic theorists have found additional reason to restrict their attention to the study of the quantitative elements in a market economy: costs, prices, outputs. The result has been that theorists today remain almost wholly preoccupied with the economics of price; nonprice elements have been studied not so much for themselves as for the manner in which they affect price—output behavior and policies. The priority of price theory, of course, has not been the sole reason for the lack of an adequate theory of quality.”).
 31. Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper Perennial, 2008) [1942], 84.
 32. The opposition between traditional price competition and the “new competition” was outlined many decades ago as clearly described in William Lee Baldwin, *Antitrust and The Changing Corporation* (Durham: Duke University Press, 1961),118–225.
 33. Lawrence Abbott, *Quality and Competition. An Essay in Economic Theory* (New York: Columbia University Press, 1955), 10 (arguing, “Thus the conditions which define such a market also define the single kind of competition that can occur in it: price competition. This kind of competition has been enthroned in the theoretical literature of economics as ‘pure competition’ and ‘perfect competition,’ and has been held up by welfare economists as the ‘paragon of competition.’”); and at 122 (“The term

“imperfect” is used to denote deviations from this particular type of competition. These are imperfections from a limited viewpoint; it is of course price competition, not necessarily competition as a whole, that becomes less perfect.”).

34. Professor Gilbert refers to “innovation-centric” antitrust as opposed to “price-centric” antitrust. See Richard J. Gilbert, *Innovation Matters. Competition Policy for the High-Technology Economy* (Cambridge, MA: MIT Press, 2020), 235 (stating that “innovation-centric competition policy will achieve goals that price-centric enforcement neglects, such as ensuring opportunity for entrepreneurs to compete and thrive.”); For an historical account of this dichotomy, see William Lee Baldwin, *Antitrust and The Changing Corporation* (Durham: Duke University Press, 1961), 118–225; David B. Audretsch, William J. Baumol, and Andrew E. Burke, “Competition policy in dynamic markets,” *International Journal of Industrial Organizations*, 19 (2001): 613–634, [https://doi.org/10.1016/S0167-7187\(00\)00086-2](https://doi.org/10.1016/S0167-7187(00)00086-2) (who admits that “industrial economics has advanced substantially from its exclusively static foundations and its pre-occupation with price competition alone. In a dynamic economy competition in product and process innovations may have a more significant effect on welfare, at least in the long run, than does any likely variation in price.”).
35. *Ibid.*, 97; “For competition to be ‘perfect’ there must also be, according to most formulations, perfect and costless mobility, divisibility, and knowledge. Then the acme of competition is reached.”).
36. This disciplining force exerts a considerable competitive constraint on existing firms which are bound to innovate in order to survive. Therefore, the innovation takes place mostly within the existing firms and may explain the slower rate of creating of new firms. While it is today vilipended as evidence of slower innovation, it has indeed always been present in cases of high innovation rates. Indeed, in 1943, Paul Sweezy already noted that “Nowadays ... the appearance of important new firms is a rare event ... Innovation is carried out largely by existing enterprises almost as a part of their regular routine,” in Paul H. Sweezy, “Professor Schumpeter’s Theory of Innovation,” *Review of Economic Statistics*, 25(1) (1943): 93–96, <https://www.jstor.org/stable/1924551>. Therefore, current claims that the alleged slower rates of creation of companies may result from lower innovation appears misguided. Higher innovation rates in existing firms better explains the innovation may less oftentimes take place from potential entrants. See also David J. Teece, *Dynamic capabilities & strategic management. Organizing for Innovation and Growth* (Oxford: Oxford University Press, 2009): 252–253.
37. David J. Teece, *Dynamic capabilities & strategic management. Organizing for Innovation and Growth* (Oxford: Oxford University Press, 2009): 250–255.
38. Antitrust reform does not necessarily suggest a change of antitrust laws but rather a change of enforcement paradigm through soft law instruments, agencies, and courts practices. In that regard, we concur with Prof. Gilbert who considered that “antitrust laws do not have to be rewritten to address innovation,” in Richard J. Gilbert, *Innovation Matters. Competition Policy for the High-Technology Economy* (Cambridge, MA: MIT Press, 2020) 235.
39. Although vulgarized seminally by Joseph Schumpeter, the figure of the entrepreneur as innovator was created in 1755 by the Irish-French economist Richard Cantillon who distinguished the entrepreneurs: “Only the prince and the landlords live independently; all the other classes and inhabitants are hired or are entrepreneurs” and depicted the entrepreneurs as being “never in a position to know the consumption expenditure of their city, nor for how long their customers will buy from them, given that their rivals will use all sorts of ruses to take their customers. All of this causes so much uncertainty among these entrepreneurs that it causes daily bankruptcies among them,” in Richard Cantillon, *Essai sur la Nature du Commerce en Général* (1755) [Essay on the Nature of Trade in General] (New York: Liberty Fund, 2015). See also Seamus Nevin, “Richard Cantillon –The Father of Economics, History Ireland,” 21(2) (2013): 20–23, <https://www.jstor.org/stable/41827152>; See Robert F. Hébert and Albert N. Link, “The Entrepreneur as Innovator,” *Journal of Technology Transfer*, 31 (2006): 589–597, <https://link.springer.com/article/10.1007%2Fs10961-006-9060-5>; Also, Jean-Baptiste Say depicted the figure of the entrepreneur as early as 1803 as encompassing the three functions of research, application, and labor: “[I]t is rare for one person to undertake all three operations. The most usual is that someone studies the law of nature. He is the scientist. Another person takes advantage of this

- knowledge in order to create useful products. He is the agriculturist, the manufacturer or the merchant, or, to describe them all by a collective name, the entrepreneur.” In Jean-Baptiste Say, *Traité d'économie politique* (Paris: Guillaumin, 1826).
40. David J. Teece, *Dynamic capabilities & strategic management. Organizing for Innovation and Growth* (Oxford: Oxford University Press, 2009): 253 (noting that “a focus on potential competition will help ensure that market analysis is forward thinking.”).
 41. We refer to “social” in Coasian sense, as Nobel Prize Laureate Ronald Coase identified the problem of “social” cost, see Ronald H. Coase, “The Problem of Social Cost,” *The Journal of Law & Economics*, 3 (1960), <https://www.law.uchicago.edu/files/file/coase-problem.pdf> (referring to social benefits as opposed to merely private benefits. Innovation is social in its very nature since its benefits are inherently aimed at changing society beyond the mere group of immediate consumers of a given innovation. Innovations disperses knowledge, fosters progress, and nurtures social changes.).
 42. For early modelization of the innovation as a source of competition, or “Schumpeterian competition,” see Carl A. Futia, “Schumpeterian competition,” *The Quarterly Journal of Economics*, 94(4) (1980): 675–695, <https://www.jstor.org/stable/1885663> (depicting the firms’ desire to attain market power through innovation which drives competition, thereby leading to possible concentration).
 43. Alfred D. Chandler Jr., *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, MA: Harvard University Press, 1990) which remains the seminal essay on how important scale is for companies to succeed durably. See also David J. Teece, “The Dynamic of Industrial Capitalism: Perspective on Alfred Chandler’s Scale and Scope,” *Journal of Economic Literature*, 31 (1993): 199–225, <https://www.jstor.org/stable/2728154>, 223 (who considers that “Chandler has perhaps begun to give substance to what Schumpeter had in mind when he referred to innovation as involving ‘new combinations’.”).
 44. The competition-escape innovation has been elaborated by Aghion et al., see Philippe Aghion et al., “Competition and Innovation: An Inverted-U Relationship,” *The Quarterly Journal of Economics*, 120(2) (1995), <https://doi.org/10.1093/qje/120.2.701> (the inverted-U relationship between competition and innovation is described as “when competition is low, a larger equilibrium fraction of sectors involve neck-and-neck competing incumbents, so that overall the escape-competition effect is more likely to dominate the Schumpeterian effect. On the other hand, when competition is high, the Schumpeterian effect is more likely to dominate, because a larger fraction of sectors in equilibrium have innovation being performed by laggard firms with low initial profits.”); See also, Philippe Aghion et al., “Competition, Imitation and Growth with Step-by-Step Innovation,” *The Review of Economic Studies*, 68(3) (2001): 467–492, <https://www.jstor.org/stable/2695893>; Philippe Aghion, Celine Antonin, and Simon Bunel, *Le Pouvoir de la Destruction Créatrice* (Paris: Odile Jacob, 2020), 77–101. For a confirmation of the hypothesis, see Aamir Rafique Hashmi, “Competition and Innovation: The Inverted-U Relationship Revisited,” *The Review of Economics and Statistics*, 95(5) (2013): 1653–1668, <https://www.jstor.org/stable/43554853>. Earlier accounts of the inverted-U relationship between competition and innovation were present, however, in Carl A. Futia, “Schumpeterian competition,” *The Quarterly Journal of Economics*, 94(4) (1980): 675–695, <https://www.jstor.org/stable/1885663>.
 45. For rare accounts of dynamic antitrust analysis, see Douglas H. Ginsburg and Joshua D. Wright, “Dynamic Analysis and the Limits of Antitrust Institutions”; Herbert Hovenkamp, “Schumpeterian Competition and Antitrust,” University of Iowa Legal Studies Research Paper, N°8-43 (2008), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1275986.
 46. Robert D. Atkinson, “Who Lost Lucent?: The Decline of America’s Telecom Equipment Industry,” *American Affairs Journal*, Fall 2020, Vol. IV, No. 3, <https://americanaffairsjournal.org/2020/08/who-lost-lucent-the-decline-of-americas-telecom-equipment-industry/>.
 47. David J. Teece, *Dynamic capabilities & strategic management. Organizing for Innovation and Growth* (Oxford: Oxford University Press, 2009): 48 et seq. (on the dynamic capabilities framework as foundations to the competitive advantage of the firm in rapid technological changes).

48. J. Bradford Delong, "Growth is Good," *Harvard Magazine*, January-February 2006, <https://www.harvardmagazine.com/2006/01/growth-is-good.html>.
49. See Robert D. Atkinson, "Economic Doctrines and Network Policy " (ITIF, October 4, 2010), <https://itif.org/publications/2010/10/04/network-policy-and-economic-doctrines>.
50. On the notion of technological progress being the result of entrepreneurial leadership and sufficient capital accumulation, see Rupert W. MacLaurin, "The process of technological innovation: the launching of a new scientific industry," *American Economic Review*, 40(1) (1950): 90–112, <https://www.jstor.org/stable/1802812>, who depicted the role of entrepreneurial leadership in innovation and mapped out the interlinkages between fundamental science and engineering art (i.e., innovation); Rupert W. MacLaurin, "The sequence form invention to innovation and its relation to economic growth," *The Quarterly Journal of Economics*, 67(1) (1953): 97–111, <https://doi.org/10.2307/1884150>; Rupert W. MacLaurin, "Technological Progress in Some American Industries," *American Economic Review*, 44(2) (1954), <https://www.jstor.org/stable/1818334>.
51. Rupert W. MacLaurin, "The sequence form invention to innovation and its relation to economic growth," *The Quarterly Journal of Economics*, 67(1) (1953): 97–111, <https://doi.org/10.2307/1884150>.
52. See Robert D. Atkinson and David B. Audretsch, "Economic Doctrines and Approaches to Antitrust" (ITIF, January 2011), <https://itif.org/files/2011-antitrust.pdf>, who refer to the "innovation school."
53. For instance, see David B. Audretsch, William J. Baumol, and Andrew E. Burke, "Competition policy in dynamic markets," *International Journal of Industrial Organizations*, 19 (2001): 613–634, [https://doi.org/10.1016/S0167-7187\(00\)00086-2](https://doi.org/10.1016/S0167-7187(00)00086-2), 617 (who consider that the "design of competition policy upon the concept of perfect competition as the model for maximisation of welfare—making it almost the *raison d'être* of antitrust law."); On why perfect competition is both unattainable and undesirable, see John Maurice Clark, *Competition as a Dynamic Process* (Washington, D.C.: The Brookings Institution, 1961).
54. Gunnar Eliasson, "Schumpeterian innovation, market structure, and the stability of industrial development" in Horst Hanusch (Ed.), *Evolutionary economics. Applications of Schumpeter's ideas* (Cambridge, MA: Cambridge University Press, 1988): 151–198.
55. Gregory J. Werden, "The History of Antitrust Market Definition," *Marquette Law Review*, 76(4) (1992): 123–215, <https://scholarship.law.marquette.edu/cgi/viewcontent.cgi?article=1643&context=mulr>, for an historical account.
56. Lawrence Abbott, *Quality and Competition. An Essay in Economic Theory* (New York: Columbia University Press, 1955) 80 (already noted, "Yet attempts to define an 'industry' or group unambiguously have not been successful. It is easy enough, of course, to agree on the boundaries of an industry operating under conditions of pure competition, when competing products are perfect substitutes; but when substitutes are imperfect, there seems to be no exact point at which to draw the line."); See also David J. Teece, *Dynamic capabilities & strategic management. Organizing for Innovation and Growth* (Oxford: Oxford University Press, 2009): 250–253.
57. Christopher Pleatsikas and David Teece, "The analysis of market definition and market power in the context of rapid innovation," *International Journal of Industrial Organization*, 19 (2001): 665–693, [https://doi.org/10.1016/S0167-7187\(00\)00088-6](https://doi.org/10.1016/S0167-7187(00)00088-6) (who advocate for qualitative indicia for assessing market power as opposed to traditional quantitative indicia of market definition rules); David S. Evans and Richard Schmalensee, "Some Economic Aspects of Antitrust Analysis in Dynamically Competitive Industries," *Innovation Policy and the Economy*, 2 (2002), 1–49, <https://doi.org/10.1086/653753>.
58. *Brown Shoe Co. v. United States*, 370 U.S. 294, 324 (1962). See also Louis Kaplow, "Why (Ever) Define Markets?" *Harvard Law Review*, 124 (2010): 437–517, https://dash.harvard.edu/bitstream/handle/1/30013694/vol_12402kaplow.pdf?sequence=1 (who considers that "there does not exist any coherent way to choose a relevant market without first formulating one's best assessment of market power, whereas the entire rationale for the market

- definition process is to enable an inference about market power. Why ever define markets when the only sensible way to do so presumes an answer to the very question that the method is designed to address?"); Louis Kaplow, "Market Definition: Impossible and Counterproductive," *Antitrust Law Journal*, 79(1) (2013): 361–379, <https://www.jstor.org/stable/43486961>.
59. Michael L. Katz and Howard Shelanski, "Mergers and Innovation," *Antitrust Law Journal* 74(1), 1–85, <https://www.jstor.org/stable/27897542>.
 60. Louis Kaplow, "Why (Ever) Define Markets?" *Harvard Law Review*, 124 (2010): 437–517, https://dash.harvard.edu/bitstream/handle/1/30013694/vol_12402kaplow.pdf?sequence=1; Louis Kaplow, "Market Definition: Impossible and Counterproductive," *Antitrust Law Journal*, 79(1) (2013): 361–379, <https://www.jstor.org/stable/43486961>.
 61. In two-sided platforms, market definition must include the two markets brought together by the platform in order to be accurate. However, should these two definitions of the markets take place, the normative power of the market definition rules loses its relevance given the broadening of relevant markets. See *3 Ohio v. Am. Express Co.*, 138 S. Ct. 2274 (2018).
 62. Christopher Pleatsikas and David Teece, "The analysis of market definition and market power in the context of rapid innovation," *International Journal of Industrial Organization*, 19 (2001): 665–693, [https://doi.org/10.1016/S0167-7187\(00\)00088-6](https://doi.org/10.1016/S0167-7187(00)00088-6), 687 (who consider that soft law instruments on market definition "undervalue the importance of potential competition").
 63. Robert D. Atkinson and Michael Lind, *Big Is Beautiful. Debunking the Myth of Small Business* (Cambridge, MA: MIT Press, 2018).
 64. Simon Kuznets, "Static and Dynamic Economics," *American Economic Review*, 20(3) (1930): 426–441, <https://www.jstor.org/stable/1802588>, 427 (who then already emphasized the need for qualitative indicia for a dynamic analysis as opposed to the quantitative indicia of a static perspective).
 65. Adam Weg, "Per Se Treatment: An Unnecessary Relic of Antitrust Litigation," *Hastings Law Journal*, 60(6) (2009), https://repository.uchastings.edu/cgi/viewcontent.cgi?article=3756&context=hastings_law_journal.
 66. Robert H. Bork, "The Rule of Reason and the Per Se Concept: Price Fixing and Market Division—Part I," *The Yale Law Journal*, 74 (1965), https://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=4158&context=fss_papers (who criticized the Brandeis rule of reason for creating legal uncertainties); Robert H. Bork, "The Rule of Reason and the Per Se Concept: Price Fixing and Market Division—Part II," *The Yale Law Journal*, 75 (1966), https://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=4159&context=fss_papers (who lamented that "the overextension of the per se concept by the courts thus has the same sort of effect upon consumers as do cartel agreements.").
 67. Oliver Wendell Holmes, *The Common Law* (Boston: Little Brown and Co., 1881) [2011], <http://www.general-intelligence.com/library/commonlaw.pdf>, 129 (writing that "the law does not even seek to indemnify a man from all harms ... There are certain things which the law allows a man to do, notwithstanding the fact that he foresees that harm must be taken, to another will follow from them ... He may establish himself in business where he foresees that of his competition will be to diminish the custom of another shopkeeper, perhaps to ruin him."); Holmes's legal pragmatism captured the balancing exercise in antitrust cases as evidenced in his opinion in *Vegeahn v Guntner et al.*, 44 N.E. 10777 (Mass. 1896) where, at 1081, referring to combinations (i.e., innovations), that "one of the eternal conflicts out of which life is made up is that between the effort of every man to get the most he can for his services, and that of society, disguised under the name of capital, to get his services for the least possible return. Combination on the one side is patent and powerful. Combination on the other is the necessary and desirable counterpart, if the battle is to be carried on in a fair and equal way." On the relevance of Oliver Wendell Holmes's legal pragmatism for today's antitrust enforcement, see Spencer Weber Waller, "The Modern Antitrust Relevance of Oliver Wendell Holmes," *Brooklyn Law Review*, 59 (1993): 1443–1471.

68. Jacques Crémer, Yves-Alexandre de Montjoye, and Heike Schweitzer, *Competition Policy for the Digital Era* (European Commission: Brussels, 2019): 3, <https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>.
69. For a theoretical account, see William J. Baumol, “When is inter-firm coordination beneficial? The case of innovation,” *International Journal of Industrial Organization*, 19 (2001): 727–737, [https://doi.org/10.1016/S0167-7187\(00\)00091-6](https://doi.org/10.1016/S0167-7187(00)00091-6).
70. Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper Perennial, 2008) [1942], 91.
71. Benjamin Gomes-Casseres, “Entrepreneurship Through Mergers and Alliances. Schumpeter Remixed,” in Sharon Matusik and Jeffrey Reuer (Eds.), Chapter 4, *Handbook on Entrepreneurship and Collaboration* (Oxford: Oxford University Press, 2019): 59–81, referring to firms’ alliances as “constellations” and noting that “the game of strategy may have changed—with complex constellations now battling against firms—but we still keep score the old way.”
72. Robert D. Atkinson, “How Progressives Have Spun Dubious Theories and Faulty Research Into a Harmful New Antitrust Doctrine” (ITIF, March 2021), <https://itif.org/publications/2021/03/10/how-progressives-have-spun-dubious-theories-and-faulty-research-harmful-new>.
73. David J. Teece, *Dynamic capabilities & strategic management. Organizing for Innovation and Growth* (Oxford: Oxford University Press, 2009), 249.
74. Ibid, noting both that “the essence of the dynamic competition approach is that technological change itself shapes industry structure” and that “path dependencies and dynamic increasing returns are likely to be present in many circumstances.”
75. David J. Teece, *Dynamic capabilities & strategic management. Organizing for Innovation and Growth* (Oxford: Oxford University Press, 2009), 82–112.
76. Alfred D. Chandler Jr., *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, MA: Harvard University Press, 1990).
77. Michael L. Katz, Howard Shelanski, “Mergers and Innovation,” *Antitrust Law Journal* 74(1), 1–85, <https://www.jstor.org/stable/27897542>
78. Ibid; David J. Teece, *Dynamic capabilities & strategic management. Organizing for Innovation and Growth* (Oxford: Oxford University Press, 2009): 256–257.
79. One of the founders of Ordoliberalism, Franz Böhm, strived for “a model of pure or perfect market economy” wherein a heavily regulated market economy was compatible with the ideal of socialism when he made clear that “it would be a complete misconception to assume that to be favourably inclined towards a market economy necessarily requires the renunciation of socialism,” in Franz Böhm, “Left-Wing and Right-Wing Approaches to the Market Economy,” *Zeitschrift für die gesamte Staatswissenschaft* (1979): 442–448, <https://www.jstor.org/stable/40750153> (where the Ordoliberal opposition to the figure of the entrepreneur, more than an opposition to Marxist views, is revealed when the author states, “So here too there is ample scope for ‘left-wing’ and ‘right-wing’ approaches to the market economy, and for those who will mutually monitor one another’s activities and call attention to one another’s errors. The entrepreneurs, on the other hand, in contrast with their emphatic declarations in favour of the market economy, are more inclined, at least, to contribute to its general abuse and destruction. In fact, the most radical and comprehensive socialist attacks on the market economy, such as that of Marx, do not undermine the market’s authority as seriously as the unscrupulous and ignorant cynicism from inside the camp of those who are supposed to be supporting the market.” German Ordoliberal founders, with Böhm, and Neo-Brandeisians, with Sweezy’s influences, share the Marxist critique of the dynamic view of competition propelled by the entrepreneurs as innovators.).