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The 'Crisis' of Antitrust Economics

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THE “CRISIS” OF ANTITRUST ECONOMICS

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ABSTRACT

The extant antitrust frameworks in the EU, UK and US are being challenged conceptually, ideologically and empirically. In particular, they are criticized for downplaying the economic and political cost of under-enforcement. In this essay I accept, for the sake of the argument, that enforcement has been excessively lenient, though I believe the jury is still out, and focus on investigating whether the alleged under-enforcement of the competition laws is caused by the move towards a “more-economics approach” to competition law enforcement. In my opinion, the evidence is mixed. Yet, the answer should not be less economics but better economics and greater scrutiny of both economic and non-economic evidence when they fail to point in the same direction.

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I. INTRODUCTION

What is Antitrust Economics (“AE”)? According to ChatGPT 4.0, “it is a branch of economics that focuses on promoting and maintaining market competition by preventing and reducing anti-competitive practices”, which “underpins the development and enforcement of competition law”. AE thus provides the tools required to assess the competitive effects of agreements, unilateral actions, and mergers.

The same source states that “the 21st century has introduced unprecedented challenges that have strained the existing antitrust frameworks, leading to what many experts refer to as a crisis in the field”. Indeed, the extant frameworks in the EU, the UK and the US, the most significant jurisdictions until recently, are first being challenged conceptually. The standard for enforcement supported by antitrust economists – the consumer welfare standard – is criticized for its alleged focus on the short-term price effects of the contested practices.

These frameworks are also berated as excessively reliant on economic theories featuring self-correcting markets populated by super-rational agents. From the viewpoint of enforcement, the established frameworks are also seen as unduly burdened by the need to undertake complex economic analyses, either because some conducts are assessed under (a) the “rule of reason” standard, as in the US, or (b) presumptions that are triggered only after complex economic tests, such as the As-Efficient Competitor Test, have been implemented, as in the EU.

Finally, and most importantly in my opinion, the extant frameworks are also criticized for their alleged pro-market ideological bias in favour of minimizing the risk of false convictions (Type I errors), thus ignoring, or at least downplaying, the risk and cost of under-enforcement, which is not only economic but also political.

The evidence adduced in support of the under-enforcement claim is varied. First, it is argued that the under-enforcement of the competition laws has resulted in increases in market power in all sectors of the economy, in particular in high-tech markets, that have caused various adverse macroeconomic developments in Europe, the UK and especially in the US, such as the decline in the labour share of national income, the reduction in productive investment and thus productivity, and the increase in income and wealth inequality.¹ Secondly, it is averred that the lenient approach to mergers has allowed market leaders in high-tech markets to evade competition and thus escape the disciplinary

¹ See, e.g., Branco Milanovic, *GLOBAL INEQUALITY: A NEW APPROACH FOR THE AGE OF GLOBALIZATION* (Harvard Univ. Press 2018); Thomas Philippon, *THE GREAT REVERSAL* (Belknap Press 2019); Jan Eeckhout, *PROFIT PARADOX: HOW THRIVING FIRMS THREATEN THE FUTURE OF WORK* (Princeton Univ. Press 2021).

force of potential entry and disruptive innovation, by acquiring actual and potential competitors.² Thirdly, and in my view more persuasively, those alleging that the competition laws have been underenforced, point to the very limited number of abuse of dominance and merger prohibition decisions and the also limited number of antitrust settlements and mergers approved subject to strict conditions. In their opinion, the lack of activity has necessarily led to an excessive number of false acquittals and merger clearances (Type II errors).

In this essay I will not question these pieces of evidence, which I have critically considered in a joint paper with Judge Douglas H. Ginsburg and Koren Wong-Erwin.³ That is, for the sake of the argument, I will accept that competition law enforcement has been excessively concerned with Type I errors, which has resulted in too many Type II errors. I will not discuss allegations about the alleged nefarious influence of economic consultants either.⁴

The first question I seek to address here is whether this outcome is the result of an excessive reliance on the discipline of economics. That is, my goal is to assess whether the alleged under-enforcement of the competition laws is caused by the move, in the 80s in the US, and somewhat later in the UK and the EU (post 2004), towards a “more-

² From 2010 to 2020, Alphabet, Amazon, Apple, Meta, and Microsoft collectively acquired more than 400 firms, predominantly in the technology sector. Prominent examples include the Google/YouTube, Facebook/Instagram, Facebook/WhatsApp, and Microsoft/GitHub mergers. See Pauline Affeldt & Reinhold Kesler, *Big Tech Acquisitions: Towards Empirical Evidence*, 12(6) J. OF EUROPEAN COMP. L. & PRAC. 471–48 (2021); see also Elena Argentesi, Paolo Buccirossi, Emilio Calvano, Tomaso Duso, Alessia Marrazzo & Salvatore Nava, *Merger policy in digital markets: An ex-post assessment*, DIW Berlin Discussion Paper No. 1836 (2019). Some of these acquisitions (so-called “killer acquisitions”) are motivated by a design to kill a potential future competitor, while many others (so-called “reverse killer acquisitions”) are meant to substitute for the acquirer’s standalone effort to expand into a particular space. Such acquisitions reduce the contestability of the acquirer’s target and origin markets, respectively. See Ariel Ezrachi & Maurice E. Stucke, *HOW BIG-TECH BARONS SMASH INNOVATION—AND HOW TO STRIKE BACK* (Harper Business 2022); see also James Bes- sen, *NEW GOLIATHS: HOW CORPORATIONS USE SOFTWARE TO DOMINATE INDUSTRIES, KILL INNOVATION, AND UNDERMINE REGULATION* (Yale Univ. Press 2022).

³ See Jorge Padilla, Douglas H. Ginsburg & Koren Wong-Ervin, *Dynamic Competition and Antitrust: Quick-Look Inferences from the Analysis of Big Tech’s R&D Expenditure Ratios*, forthcoming in the ANTITRUST L. J. (2024), available at SSRN: <https://ssrn.com/abstract=4721216>.

⁴ See Marlene Jugl, et al., *Spamming the regulator: exploring a new lobbying strategy in EU competition procedures*, J. OF ANTITRUST ENFORCEMENT. 1-22 (2023). See also Jorge Padilla, *Expelling the Economists from Merger Control*, CPI ANTITRUST CHR. (2023), available at SSRN: <https://ssrn.com/abstract=4693928>.

economics approach” to competition enforcement, or it responds, at least in part, to other causes, such as e.g. the anti-interventionist bias of some courts, such as the US Supreme Court. The second question I discuss is whether, even if reliance on economics is indeed part of the problem, the solution to under-deterrence requires abandoning the discipline imposed by rigorous economic analysis.

II. THE CASE AGAINST ANTITRUST ECONOMICS

Has reliance on economics caused the alleged under-enforcement of competition laws? In this Section, I discuss each argument that I am aware of, or that I can intuit, that suggests it has.⁵ First, I will consider positive answers based on the alleged ideological bias of the economics profession.⁶ Secondly, I will discuss the view that the poor state of economics as a scientific discipline makes it useless or detrimental in practice. Lastly, I will review claims that the adoption of legal standards that are informed by economics has disproportionately increased the cost of enforcement.

⁵ I will not try to ascribe each of the claims discussed below to a particular author or group of authors. That would be a daunting, and likely impossible, task. Yet, the reader interested in the foundations of these claims can read, among others, one or more of the following papers, and references therein: Jonathan B. Baker, *Taking the Error Out of "Error Cost" Analysis: What's Wrong with Antitrust's Right*, 80 ANTITRUST L. J. 1 (2015). Darren Bush, *Antitrust Heretics and the Problem of One-Sided Bias: An Essay* (2023), available at SSRN: <https://ssrn.com/abstract=4601891>; Cristina Caffarra, *Are Letta, Macron and Draghi Marking the End of Neoliberalism in Europe?*, PROMARKET (2024); Filippo Lancieri, *The Political Economy of the Decline of Antitrust Enforcement in the US*. PROMARKET (2024); Philip Marsden, *Who Should Trust-Bust? Hippocrates, Not Hipsters (feat. evidence-led suggestions for how authorities could be more "progressive")*, CPI ANTITRUST CHRON. (2018); A. Douglas Melamed, *Antitrust Law and Its Critics*, 83(2) ANTITRUST L. J. 269-292 (2020); A. Douglas Melamed & Nicolas Petit, *The Misguided Assault on the Consumer Welfare Standard in the Age of Platform Markets*, 54 REV. INDUS. ORG. 741 (2019); Nicolas Petit & Lazar Radic, *The Necessity of a Consumer Welfare Standard in Antitrust Analysis*, PROMARKET (2023); Seth B. Sacher & John M. Yun, *Twelve Fallacies of the "Neo-Antitrust" Movement*, 26(5) GEO. MASON L. REV. 1491-1530 (2019); Carl Shapiro, *Antitrust in a Time of Populism*, 61 INT'L J. INDUS. ORG. 721-31 (2018); Tommaso Valletti, *What Have The Consultants Ever Done For Us?*, PROMARKET (2024); Joshua D. Wright *et al.*, *Requiem for a Paradox: The Dubious Rise and Inevitable Fall of Hipster Antitrust*, 51 ARIZ. ST. L. J. 293 (2019); Tim Wu, *After Consumer Welfare, Now What? The "Protection of Competition" Standard in Practice*, CPI ANTITRUST CHRON. (2018); Tim Wu, *THE CURSE OF BIGNESS: ANTITRUST IN THE NEW GILDED AGE*. (Columbia, 2018).

⁶ Contrary to what is often assumed, the limited data available suggests that economists are not heartless conservatives. See John Cochrane's The Grumpy Economist blog "Political diversity at the AEA", available at <https://johnhcochrane.blogspot.com/2020/10/political-diversity-at-aea.html>.

A. Ideological Bias

Claim A.1. *The more-economic approach in competition law has led to under-enforcement because economists believe that markets self-correct so that the effects of any anti-competitive practice are always short-lived.*

Discussion. I cannot deny that many economists believe that markets tend to respond dynamically and that those responses may address and resolve the effects of anti-competitive actions. Beginning in the early 1950s, for example, the Chicago School literature argued that many unilateral practices should be *per se* legal.⁷ As explained in Evans & Padilla, “That was based on two observations. The first was that many of these practices usually created efficiencies. The second is that price theory demonstrates that firms with monopoly power may lack the incentives to use certain practices for anti-competitive purposes”.⁸ It is also based on the belief that the costs of false convictions in anti-trust cases other than those involving cartels are likely to be significantly larger than those of false acquittals. As Judge Easterbrook observed,⁹ “There is no automatic way to expunge mistaken decisions of the Supreme Court. A practice once condemned is likely to stay condemned, no matter its benefits. A monopolistic practice wrongly excused will eventually yield to competition, though, as the monopolist’s higher prices attract rivalry”.

But not everyone agrees. The post-Chicago literature has effectively and convincingly challenged the Chicago School’s views by showing that certain unilateral practices can be anti-competitive in some circumstances.¹⁰ These developments have led economists to be

⁷ See e.g. Robert H. Bork, *Vertical Integration and the Sherman Act: The Legal History of an Economic Misconception*, 22 U. CHI. L. REV. 157 (1954); Aaron Director & Edward H. Levi, *Law and the Future: Trade Regulation*, 51 NW. U.L. REV. 281 (1956); Ward S. Bowman, Jr., *Tying Arrangements and the Leverage Problem*, 67 YALE L. J. 19 (1957); John S. McGee, *Predatory Price Cutting: The Standard Oil (NJ) Case*, 1 J. L. & ECON. 137 (1958); Lester G. Telser, *Why Should Manufacturers Want Fair Trade?* 3 J. L. & ECON. 86 (1960). See also Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. PENN. L. REV. 925-26 (1979).

⁸ See David S. Evans & Jorge Padilla, *Designing Antitrust Rules for Assessing Unilateral Practices: A Neo-Chicago Approach*. 72 U. CHI. L. REV. 73-98 (2005).

⁹ See Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 9-14 (1984).

¹⁰ See Michael D. Whinston, *Tying, Foreclosure, and Exclusion*, 80 AM. ECON. REV. 837 (1990); Dennis W. Carlton & Michael Waldman, *The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries*, 33

more receptive to leveraging theories of harm and more skeptical about efficiency justifications than the economists of the Chicago School.

This does not mean an outright rejection of the main Chicago ideas, in particular, the scepticism about intervention when certain conditions hold. The consensus today is that both Type I errors (false convictions) and Type II errors (false acquittals) are likely and costly. It is simply not true that Type I errors do not exist, but they do not need to be persistent, since bad decisions do get expunged or worked around, though market forces play little corrective role for pro-competitive business practices deemed anti-competitive. But Type II errors are also likely and costly, perhaps significantly more than it was thought. Dominant firms in turn can slow their eventual destruction or demotion, either using anti-competitive methods or by lobbying the political process. In short, markets need not self-correct and market power need not be transient, because entry and disruptive innovation cannot be taken for granted, and indeed most economists never did take them for granted.

Claim A.2. *The more-economic approach in competition law has led to under-enforcement because economists generally subscribe to the reactionary version of the Precautionary Principle.*

Discussion. In regulation, the Precautionary Principle is: “First do no harm”.¹¹ And true, for many economists, it is a sacred principle, though it is unclear why. A consequence of decisions that risk both Type I and Type II errors is that over-enforcement can do harm, and under-enforcement can permit harm. A dispassionate economic assessment of costs and benefits makes no distinction between the two: harm that comes from misplaced action is no better or worse than harm that comes from misplaced inaction. Thus, there could be two interpretations of the Principle: a *reactionary interpretation* – limiting intervention to avoid over-deterrence – and a *progressive interpretation* – limiting passivity to avoid under-deterrence.

The reactionary interpretation of the Precautionary Principle states that intervention is only justified as regards actions—mergers,

RAND. J. ECON. 194, 205, 212 (2002) (proposing that tying can extend an existing monopoly into a new market, as well as preserve an existing monopoly); Jay Pil Choi & Christodoulos Stefanadis, *Tying, Investment, and the Dynamic Leverage Theory*, 32 RAND. J. ECON. 52, 60-62 (2001) (proposing that tying by an incumbent lowers the investment incentive of entrants, thereby lowering the probability of entry into the market). See also Jean Tirole, *THE THEORY OF INDUSTRIAL ORGANIZATION* 361-80 (MIT Press, 1988) (discussing how firms can use limit pricing and predation to preclude entry - and how a firm's reputation for engaging in such behaviors will affect how potential rivals respond).

¹¹ See Cass R. Sunstein, *Beyond the Precautionary Principle*, 151 U. PENN. L. REV. 1003-1058 (2003).

agreements or unilateral practices—that have an uncertain potential to give rise to substantial anti-competitive effects, unless those in favour of regulation can show that intervention is unlikely to produce adverse unintended consequences.

The reactionary interpretation resists regulatory intervention relying on three primary arguments: perversity, futility and jeopardy. As explained by Hirschman,¹² the perversity thesis states that regulatory intervention risks producing adverse unintended consequences; the futility thesis states that, due to e.g. informational problems, intervention is at best ineffectual; and the jeopardy thesis states that the benefits of intervention, albeit high, are probabilistic while its costs may be smaller but are more certain.

The perversity thesis is the most commonly used of the three by conservative economists. Hayek described in *The Road to Serfdom*,¹³ the negative unintended consequences that follow from attempts at large-scale social control despite the best of intentions on the part of advocates of government regulation. Economists have argued that, as with many laws, there are often serious negative unintended consequences of the antitrust laws. For example, McAfee and Vakkur state,¹⁴ “There are several uses of the antitrust laws that have nothing to do with promoting competition, and at least two uses whose purpose is reducing competition”. More recently, Thatchenkery and Katila analyze the effects of the US DoJ’s antitrust intervention against Microsoft (interoperability) on subsequent innovation and profitability by infrastructure applications firms and show the “counterintuitive finding ... that antitrust intervention benefits ecosystems in the form of innovation but may threaten the financial viability of some of the very firms it is meant to help”.¹⁵

In contrast, the progressive interpretation of the Principle states that a lack of decisive evidence of harm should not be a ground for refusing to regulate. Applied to competition law, this interpretation implies that intervention should not be precluded by the absence of scientific certainty, if there is a risk of substantial consumer harm. In the words of DG Comp’s former Chief Competition Economist Tommaso Valletti, “Too often, we end our papers with the phrase: ‘we need more research.’ This is okay in academic writing, but it’s a death sentence in

¹² See Albert Hirschman, *THE RHETORIC OF REACTION*. (Harv. U. Press, 1991).

¹³ See Frederick A. Hayek, *THE ROAD TO SERFDOM*. (U. Chi. Press, 1945).

¹⁴ See R. Preston McAfee & Nicholas V. Vakkur, *The Strategic Abuse of the Antitrust Laws*, 2 J. OF STRAT. MGT. EDU. (2005).

¹⁵ See Sruthi Thatchenkery & Riitta Katila, *Innovation and Profitability Following Antitrust Intervention Against a Dominant Platform: the Wild, Wild West?* 44 STRAT. MGT. J. 943-976 (2023).

policy”.¹⁶ The point being that the cost of delay is the entrenchment of market power and the irreversibility of the distortion of competition.

Neither is there consensus on the weight, if any, that should be given to the Principle. First, some object that the Principle offers no guidance and can lead to forbidding all courses of action, including inaction.¹⁷ Secondly, others defend the use of the Maximin Principle—choose the policy with the best worst-case outcome—when existing knowledge does not permit regulators to assign probabilities to outcomes.¹⁸ Thirdly, others see value in postponing irreversible decisions, such as approving a merger that increases concentration, to after getting more information because it allows the decision maker to take advantage of the option value of taking a decision in due course.¹⁹ Lastly, most economists, including myself, consider that the decision to intervene in antitrust and merger cases should be based on a “balance of harms” calculation (which I describe below in response to Claim C.1., with an error-cost framework) rather than any other *ad hoc* principle.

Claim A.3. *The more-economic approach in competition law has led to under-enforcement because economists focus excessively on (consumer) welfare and ignore fairness, among other equity considerations, and rivalry.*

Discussion. Essentially, this criticism argues that economics has caused competition law to pursue the wrong objective: the consumer welfare standard. Indeed, most economists are consequentialist and, more precisely, welfarist, though not all support the consumer welfare standard. Some industrial organization economists, among which you can find many antitrust economists, consider that the goal of economic policy in a market is to maximize “total welfare” (i.e. the sum of consumer welfare and industry profits) in that market. Others regard the consumer welfare standard to be the correct standard from an economic viewpoint for distributional, political economy, administrability and

¹⁶ See Tommaso Valletti, “Doubt is Their Product”: *The Difference Between Research and Academic Lobbying*, PROMARKET, (2020), available at <https://www.promarket.org/2020/09/28/difference-between-research-academic-lobbying-hidden-funding/>.

¹⁷ See Sunstein (2003) *supra* note 11. See also Cass R. Sunstein, *The Paralyzing Principle*, REGULATION, 32-37 (Winter 2002-2003).

¹⁸ See Jon Elster, EXPLAINING TECHNICAL CHANGE: A CASE STUDY IN THE PHILOSOPHY OF SCIENCE. (Cam. U. Press, 2009.)

¹⁹ See Christian Gollier & Nicolas Treich, *Decision Making Under Specific Uncertainty: The Economics of the Precautionary Principle*, 27 J. OF RISK & UNCERT’Y. 77–103 (2003).

incentive reasons.²⁰ Yet, the reason why competition policy has ignored total welfare to concentrate on consumer welfare as a goal is partly due to a conceptual mistake by Robert Bork in his book, *The Antitrust Paradox*.²¹

In any event, the current debate is not between consumer welfare and total welfare (which is likely to lead to less intervention), but rather between consumer welfare and something else: fairness, equity, rivalry, ... Those criticizing the consumer welfare goal regard it as inherently subjective, placing undue emphasis on prices (and output), failing to weigh appropriately the importance of preserving rivalry in the long run, and ignoring sociological and political goals, such as the protection of democracy. In a nutshell, they consider it invites tolerance of anti-competitive practices, including mergers.²²

These authors criticize the consumer welfare standard because, in their view, it restricts intervention to actions that are likely to lead to higher prices and lower output and dismisses the benefits of quality and innovation, rounds uncertain harms down to zero and ignores input suppliers and workers. Yet, for most economists,²³ the correct interpretation of the standard is that competition policy interventions must be directed at protecting the welfare of consumers. Higher prices and lower quality reduce consumer welfare, and it increases when firms innovate, etc.

As regards fairness, including egalitarianism, following Kaplow & Shavell,²⁴ many economists sustain that “legal rules should be selected entirely with respect to their effects on the well-being of individuals in society and that notions of fairness ... should receive no independent

²⁰ See Alison Oldale & Jorge Padilla, *For Welfare's Sake? Balancing Rivalry and Efficiencies in Horizontal Mergers*. 55(4), ANTITRUST BULL., 953-991 (2010). See also Mark Armstrong & John Vickers, *A Model of Delegated Project Choice*, 78(1) ECONOMETRICA, 213-244 (2010).

²¹ See Robert H. Bork, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF*. (Chi. Univ. Press. 1978). Bork claims that the total welfare standard reflects the proper consumer welfare standard, since everyone (including producers) is a consumer.

²² See Maurice E. Stucke. *Reconsidering Antitrust's Goals*. 53 BOSTON COLL. L. REV. 551 (2012). See also Lina M. Khan. *The Ideological Roots of America's Market Power Problem*. THE YALE L. J. FORUM. (2018) available at <https://www.yalelawjournal.org/forum/the-ideological-roots-of-american-market-power-problem>.

²³ See e.g. Carl Shapiro, Hearing Before the S. Comm. on Antitrust of the S. Comm. on the Judiciary, 115th Cong. at 3–4, (2017) (statement of Carl Shapiro, Transamerica Professor of Business Strategy, Walter A. Haas School of Business, Univ. of California at Berkeley), available at: <https://www.judiciary.senate.gov/download/12-13-17-shapiro-testimony>.

²⁴ See Louis Kaplow & Steven Shavell, *FAIRNESS VERSUS WELFARE*, (Harv. Univ. Press. 2002) at 37.

weight in the assessment of legal rules”. For these economists, therefore, fairness cannot become a goal in itself.²⁵

The same applies to the protection of rivalry. Ahlborn & Padilla state,²⁶ “Consider, for example, a policy which makes every consumer worse off because it redistributes output from efficient, low-priced competitors towards inefficient, high priced ones. Could such a policy be justified because it redistributes market shares from large companies to small companies? ... The social value of policies aimed at preserving rivalry and ensuring a competitive level playing field is given by the impact of such policies on aggregate social welfare. Protecting rivalry is not an end in itself: it only makes sense if it helps to increase consumer welfare”.

In my opinion, abandoning the consumer welfare principle would be a serious mistake and it would also be wrong to dilute this standard by incorporating new and ill-defined goals. What is important is to clarify the notion of consumer welfare so that agencies and courts understand that it is an encompassing concept, which can and should accommodate all price and non-price factors, including sociological, distributional and political ones, that provide utility.

In conclusion, it is important to distinguish between what economics says and what economists do when using tools with simplifying assumptions. For example, economics is clear about the role of innovation as part of the consumer welfare standard, even if several of the tools used by economists, such as the hypothetical monopolist test, only focus on prices.

Claim A.4. *The more-economic approach in competition law has led to under-enforcement because economists focus excessively on efficiency.*

Discussion. Lionel Robbins famously defined economics as “the science which studies human behaviour as a relationship between ends

²⁵ While fairness as a goal may conflict with efficiency – e.g. ensuring that all firms, including small and less efficient ones, can operate viably in the market may cause productive and dynamic inefficiencies – economists since Adam Smith have regarded equity concerns to be not only legitimate but perfectly consistent with the maximization of social welfare. See e.g. Amartya Sen, *The Possibility of Social Choice*, 89(3) AM. ECON. REV. . 349-378 (1999).

²⁶ See Stephen W. Davies and Franco Mariuzzo, *Inequality and concentration: Are the poor more exposed to concentrated markets?* (2022), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4013575, arguing that competition interventions will tend to benefit the poor more than the rich – because poor people are more reliant on goods from more concentrated industries.

and scarce means which have alternative uses”.²⁸ Indeed, economics focuses on efficiency: the efficient allocation of resources (or *allocative efficiency*), which is maximized when goods and services end in the hands of those who value them most (i.e. all gains from trade are exhausted); *productive efficiency*, so that goods and services are produced and commercialized by those who can produce more with the same inputs, or produce the same less wastefully; and *dynamic efficiency*, so that the market rewards those who introduce more efficient technologies (process innovation) and/or those who bring new, superior products and services into the market (product innovation).

As stated by Nobel Prize Laureate George Stigler in his essay, *The Economist as Preacher*,²⁹ “If one policy will achieve more of a given goal than a second policy with less cost in resources, the first policy is clearly superior, and there is no room for argument over ethics. This indeed has been the essential nature of the great majority of economists’ preachings on public policy”. Stigler continues “[the economist] needs no system to criticize error: he is simply a well-trained political arithmetician. He lives in a world of social mistakes, ancient and modern, subtle and simple, and since he is simply pointing out to the society that what it seeks, it is seeking inefficiently, he needs not quarrel with what [society] seeks”.

Thus, for economists, a policy is flawed if there is an alternative policy that achieves more of the desired world at a lesser cost. Thus, from an economic viewpoint, the more economic approach to competition law enforcement would be demonstrably flawed, as too lenient, if the critics can show that there is another approach that can produce more of the desired goal without increasing the cost to society. Otherwise, their criticism reflects a “view of society as a community with acceptable, if not always admirable, goals but possessing only a feeble understanding of efficient methods of achieving them”; a view that as Stigler, many economists consider to be “profoundly mistaken”.

In conclusion, I believe the role of the economist is to assess the effectiveness of policies on the basis of how efficient they are in achieving their goals. We live in a limited world in which it is crucial to use our resources efficiently and allocate them to those uses where they are most valuable. Quoting Stigler again, “Economists have no special, professional knowledge of that which is virtuous or just”. Thus, we can have a discussion about whether the right goal of competition law is the promotion of consumer welfare or something else (see above), but no

²⁸ See Lionel Robbins. AN ESSAY ON THE NATURE AND SIGNIFICANCE OF ECONOMIC SCIENCE. (London: MacMillan & Co. 1932).

²⁹ See George J. Stigler, THE ECONOMIST AS PREACHER, AND OTHER ESSAYS, (Chi. Univ. Press, 1982).

one, in good conscience and thinking clearly, could disagree with the efficient pursuit of whatever goal is finally agreed.

B. Ambiguity, Complexity, Mathiness

Claim B.1. *The more-economic approach in competition law has led to under-enforcement because it has increased the costs of enforcement without improving its outcomes. This is the result of the immoderate use of complex mathematical models that are unrealistic and relied on to cover vacuous statements or unacknowledged value judgments.*

Discussion. There is no such thing as a perfect economic or econometric model. Economic and econometric models are not maps scale 1:1.³⁰ They are not perfect replicas of the real world they model; nor should they be. Like maps, they are deliberate simplifications designed for a purpose. A 1:1 scale map would be useless – we already live on it. The suitability of a simplification depends on the purpose; road maps are good for some purposes, and not for others. Economic and econometric models are the same. A particular model may or may not be fit for a particular purpose, but that will not depend on its accuracy for its own sake.

Economists prefer a parsimonious, simple model to a complex one. Yet, complexity is sometimes unavoidable. As Hans Hahn, one of the philosophers of the Vienna Circle, explained back in 1933,³¹ “Because intuition turned out to be deceptive in so many instances, and because propositions that had been accounted true by intuition were repeatedly proved false by logic, mathematicians became more and more skeptical of the validity of intuition. [Scientists] learned that it is unsafe to accept any mathematical proposition, much less to base any mathematical discipline on intuitive convictions”.

³⁰ To illustrate this point when teaching graduate students I like to quote Jorge Luis Borges and Alberto Bioy Casares: “... In that empire, the art of cartography reached such perfection that the map of one province alone took up the whole of a city, and the map of the empire, the whole of a province. In time, those unconscionable maps did not satisfy, and the Colleges of Cartographers set up a map of the empire which had the size of the empire itself and coincided with it point by point. Less addicted to the study of cartography, succeeding generations understood that this Widespread Map was useless and not without impiety they abandoned it to the inclemency of the sun and of the winters. In the deserts of the West some mangled ruins of the Map lasted on, inhabited by animals and beggars; in the whole country there are no other relics of the Disciplines of Geography.” (J. L. Borges and A. Bioy Casares, *On Exactitude in Science*, in Jorge Luis Borges, *A UNIVERSAL HISTORY OF INFAMY*. (Penguin, 1975.)

³¹ See Hans Hahn, *The Crisis in Intuition* (1933), in Hans Hahn, *EMPIRICISM, LOGIC AND MATHEMATICS*, (Springer, 1980.)

Like Nobel Prize Laureate Paul Romer,³² I am also against the use of mathematics in a manner that obscures rather than illuminates economic reasoning—what he terms as “mathiness”. But Romer’s critique is not against the use of mathematics in economics or econometrics *per se*, as mathematics is an essential tool for precise and clear communication of complex ideas, but rather to its misuse—where the form (complex models) takes precedence over substance (genuine economic insights). Economists must be vigilant against the allure of complexity for complexity’s sake and should strive for clarity, relevance, and realism in the application of mathematics and statistics to practical economic problems.

However, in my experience, most economists do not use mathematical and statistical models, populated with symbols and Greek letters, to annoy lawyers, or to cover their vacuous thoughts or misleading opinions. Mathematics in economic and econometric models serves to impose intellectual discipline, to avoid the risks of uncontrolled intuition, to escape from the dangers of logically incorrect but plausible narratives, especially those spiced with economics jargon. As explained by Daniel Dennett, the famous philosopher,³³ “Another reason why scientists are often suspicious of theoretical discussions conducted in “mere words” is that they recognize that the task of criticizing an argument not formulated in mathematical equations is much trickier, and typically less conclusive. The language of mathematics is a reliable enforcer of cogency.” This is also true for the debate between econometrics versus factual evidence. As Ridyard (2019) notes, econometrics is explicit about uncertainty and confidence intervals; factual evidence or, more generally, qualitative evidence is not.³⁴

The answer to “mathiness” is not to reject maths or rigour and lower our standards. Rather, it must be to require that formal models be clearly interrogated, explained, and related to the real world. Models should make their assumptions explicit and those assumptions should be assessed against the world the models seek to usefully simplify. This is important both to ensure that the maps we use are useful and to avoid the risk that cherry-picked models dictate policy regardless of their empirical support. Finally, we need to be humble and acknowledge that more work needs to be done to develop economic models of

³² See Paul M. Romer, *Mathiness in the Theory of Economic Growth*, 105 AMER. ECON. REV. 89-93 (2015).

³³ See Daniel Dennett, INTUITION PUMPS AND OTHER TOOLS FOR THINKING, (Norton, 2013.)

³⁴ See Derek Ridyard. *The ABB v Britned Cable Cartel High Court Judgment: Implications for the Use of Econometrics in Damages Estimation*. 40(6) EUROPEAN COMP. L. R. . 257 (2019).

competition that can effectively guide antitrust action, and much more empirical evidence work to falsify those models.

Claim B.2. *The more-economic approach in competition law has led to under-enforcement because it has increased the costs of enforcement without improving its outcomes. This is because the application of modern economic tools cannot produce robust results and, what is worse, is open to manipulation.*

Discussion. In 2014, former DG Comp’s Hearing Officer Wouter Wils wrote an influential paper where he polemically stated, “However much more some economists may try to pretend otherwise by wrapping their thoughts in mathematical formulas, economics is not an exact science, like physics or chemistry, but a social science, like sociology, history or moral philosophy”.³⁵ Simon Bishop, a leading economic consultant, added,³⁶ “We therefore need to remember that there are few robust economic presumptions that can be drawn from the available literature, i.e. there are few or no “universal economic truths” ... Those familiar with economic theory will know that a large number of results can often be reversed by making alternative assumptions. This is particularly true of modern economic analysis which employs game theoretic methodology”

I disagree because I believe economics is a science, even if one that can rarely benefit from implementing controlled experiments, like physics or chemistry.

The skepticism towards economics is often based on the understandable, but incorrect, belief that the application of scientific methods to the facts of a case should produce unambiguous and consistent results.³⁷ Based on these beliefs, contradictory results are incorrectly interpreted as evidence of advocacy or unprofessional behaviour.

More often than not in my experience, such discrepancies may simply reflect differences in the data, differences in the approach to economic modelling or in the assumptions used to interpret the data, differences in the empirical techniques and methodologies, or may be the result of unintentional mistakes. In other cases, the inconsistencies may simply reflect some inescapable “ambiguity”. As Charles Manski

³⁵ See Wouter Wils, *The Judgment of the EU General Court in Intel and the So-Called More Economic Approach to Abuse of Dominance*, WORLD COMPETITION (2014).

³⁶ See Simon Bishop, *Snake-oil with mathematics is still snake oil: why recent trends in the application of so-called “sophisticated” economics is hindering good competition policy environment*, EUR. COMP. REV., 2014..

³⁷ See Jorge Padilla, *The Role of Economics in EU Competition Law: From Monti’s reform to the State aid modernization package*. CONCURRENCES (2016).

stated, “We need to develop a greater tolerance for ambiguity. We must face up that we cannot answer all of the questions that we ask”.³⁸ In such cases, when the analyses submitted to test a given theory of harm produce contradictory results, but (i) all of them are scientifically valid and (ii) none of them can be considered intrinsically superior to the other(s), the only legitimate conclusion is that the available evidence can neither validate nor falsify or refute that theory. The outcome will then be determined by the allocation of the burden of proof.

C. Adverse Impact on Legal Standards

Claim C.1. *Economists’ reliance on the error cost framework has led to the adoption of legal standards, such as the rule of reason or the structured rule of reason, which are difficult, or even impossible, to implement in practice, thus leading to under-enforcement and a non-interventionist bias.*

Discussion. Economists typically advocate for legal standards that maximize long-term consumer welfare, taking into account the risk and cost of both Type I and Type II errors.³⁹ The standard that emerges from this constrained maximization exercise is often, though not always, the *rule of reason*—the standard commonly used in the US for the assessment of unilateral practices⁴⁰—or the *structured rule of reason*—the standard that characterizes the assessment of unilateral practices in DG Comp’s *Guidance*.⁴¹

Under the rule of reason, an action—whether an agreement, a merger or a unilateral practice—is regarded as anti-competitive if the likelihood and welfare cost of the Type II error exceeds the likelihood and welfare cost of the Type I error. This requires assessing likely anti-competitive effects and efficiencies and balancing them using a consumer welfare metric. Unfortunately, although the game-theoretic

³⁸ See Charles F. Manski, *IDENTIFICATION PROBLEMS IN THE SOCIAL SCIENCES*. (Harvard University Press, 1995.) See also Charles F. Manski, *Partial Identification in Econometrics* in the *NEW PALGRAVE DICTIONARY OF ECONOMICS*, 2nd edition, (McMillan, 2008.)

³⁹ See Jorge Padilla, *Decision Theory and Legal Process in EU Competition Law*, in Kris Dekeyser *et al.* (eds.) *REGULATION 1/2003 AND EU ANTITRUST ENFORCEMENT: A SYSTEMATIC GUIDE*. (Kluwer L. Int. 2022), Chapter 24, available at SSRN: <https://ssrn.com/abstract=3859937>.

⁴⁰ See Herbert Hovenkamp, *The Rule of Reason*, 72 *FLO. L. REV.* 82-167 (2018).

⁴¹ See European Commission, *Guidance on the Commission's Enforcement Priorities in Applying Article 82 EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings*, (2008), available at [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52009XC0224\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52009XC0224(01)).

developments of the post-Chicago literature have improved our understanding of the competitive effects of business practices, economics has thus far been unable to produce what we would call “identification theorems”—useful descriptions of the circumstances determining whether an action is pro-competitive or anti-competitive.

Instead, under the structured rule of reason, an action is considered to be legal unless it can be shown to go through a sequence of screens aimed at establishing the likelihood of anti-competitive effects; in which case courts and agencies still have to balance its anti-competitive and pro-competitive effects in a final stage prior to concluding that the practice is anti-competitive overall. The structured rule of reason is superior to the (unstructured) rule of reason because it limits the complex balancing of pro-competitive and anti-competitive effects to those practices that are likely to have anti-competitive effects. Compared to an evaluation of efficiencies, assessing market power, a precondition for the existence of anti-competitive effects is less burdensome. Yet, despite the superiority of the structured rule of reason approach it is bound to produce non-trivial Type I and Type II errors when the action under scrutiny is likely to produce material anti-competitive effects as well as significant efficiencies, since economics has not provided us with practical and reliable ways to balance these two effects.

However, the reaction to this grim conclusion cannot be to jettison economic analysis, adopting *per se* rules in its place that, though simple, are bound to be erroneous and cause consumer harm. The answer cannot be either getting rid of all legal tests relying on case-by-case economic analyses, as some economists have allegedly advocated.⁴² As Sir John Vickers stated for the assessment of unilateral conduct, “There must be rules of law in this area of competition policy, not least for reasons of predictability and accountability. So the issue is not rules versus discretion, but how well the rules are grounded in economics. To that end there is great scope for economic analysis and research to contribute to the development of the law on abuse of dominance. To be effective, however, economics must contribute in a way that competition agencies, and ultimately the courts, find practicable in deciding cases.”⁴³

The way forward is to develop workable “rebuttable presumptions”. A presumption of legality specifies that a business practice (e.g., a refusal to supply) is regarded as legal unless the plaintiff can demonstrate that certain economic conditions are met in practice, whereas a rebuttable presumption of illegality is applied to practices (e.g., below

⁴² See DG Comp’s Economic Advisory Group on Competition Policy (EAGCP), *An Economic Approach to Article 82*, (2005), available at https://ec.europa.eu/dgs/competition/economist/eagcp_july_21_05.pdf.

⁴³ See John Vickers, *Abuse of Market Power*, 15 *ECON. J.* 244 (2005).

cost pricing) that are regarded as illegal unless the defendant can prove that certain economic conditions hold. Presumptions of legality and illegality should be grounded on solid economic theory and evidence, not driven by ideology. A presumption of illegality is justified when there are reasons in economics to presume that the likelihood and cost of the Type II error are greater. Instead, a presumption of legality makes sense only when economics supports the prior that the Type I error is more likely and costly. Identifying the circumstances under which such presumptions fail to hold, and thus should be rebutted, is also an exercise for economists and management scientists. Provided the priors are neutrally based on economics and decision theory, these rules should effectively and efficiently implement the error-cost framework at a reasonable cost and without causing an under-enforcement bias.

In short, the error-cost framework is not the source of anti-interventionist bias. Rather, such a bias, where it exists, responds to erroneous priors that are not well-grounded on recent economic theory and evidence. As stated by Jonathan Baker,⁴⁴ “In applying decision theory, a *neutral economic tool*, to the analysis of antitrust rules, contemporary conservatives have made a series of erroneous assumptions, which collectively impart a non-interventionist bias to their conclusions. These assumptions systematically overstate the incidence and significance of false positives, understate the incidence and significance of false negatives, and understate the net benefits of various rules by overstating their costs”. (Emphasis added.) To state the obvious, the economics profession is quite diverse ideologically—indeed, conservatives may be in the minority—and, hence, it would be unfair to say that it exhibits a common or aggregate bias against intervention.

Claim C.2. *Whether or not they rely on the error-cost framework, economists’ neglect of the cost of operating the procedural system has led them to advocate legal standards that are too costly to administer and, therefore, too friendly to defendants.*

Discussion. As Judge Posner explained in his classic textbook, *Economic Analysis of the Law*,⁴⁵ the objective of a procedural system is to minimize the sum of two types of cost. The first is the cost of erroneous (judicial or administrative) decisions. The second is the cost of operating the procedural system. A folk criticism of economists in their role as advocates of rules is that they neglect the cost of administering the rules that they defend.

⁴⁴ See Jonathan Baker, *Taking the Error Out of “Error Cost” Analysis: What’s Wrong with Antitrust’s Right*, 80 ANTITRUST L. J. 1-38 (2015).

⁴⁵ See Richard A. Posner, *ECONOMIC ANALYSIS OF THE LAW: 9TH EDITION*, (Aspen Casebook Series, 2014), Chapter 22.

It is contrary to the nature of economics, especially given its focus on efficiency, to neglect the costs of adopting a more-economic approach to competition enforcement. Indeed, economists, such as Jules Dupuit and Alfred Marshall, developed “cost–benefit analysis” as a technique to judge the net social benefit or cost of a project or policy. Yet, it is true that economists searching for optimal legal standards in antitrust and merger control seem to have paid limited, if any, attention to their administrability. I confess I am partly guilty in that respect too.

There are many reasons for this. First, from a theoretical perspective, minimizing transaction costs is much less exciting than minimizing decision errors. Secondly, from a practical perspective, balancing the costs and benefits of e.g. adopting a rule of reason standard is hard (as hard as balancing the pro- and anti-competitive effects of, say, a merger). Thirdly, and perhaps surprisingly, typically graduate students in economics do not receive a single lecture on cost-benefit analysis—I certainly did not. Lastly, economists may not appreciate the complexity of the legal process and, therefore, may underestimate the implementation costs of the tests and rules that they propose.

Understanding the reasons for an omission does not justify the mistake. Because competition law enforcement impacts the welfare of individuals, and that is a treasure too precious to play with, the design of pragmatic rules, easy to implement and with desirable welfare properties should become the focus of economic research on antitrust law and policy. And the good news is that it is increasingly so: the literature dealing with the design of optimal legal standards for competition law is growing.⁴⁶ This literature shows, among other things, that the rebuttable presumptions of legality and illegality discussed above may capture satisfactorily the trade-off between administrability (i.e., minimizing the cost of operating the procedural system) and optimality

⁴⁶ See David Evans, Jorge Padilla & Michael S. Salinger, *A Pragmatic Approach to Identifying and Analyzing legitimate Tying Cases*, in I. Atanasiu and Claus D. Ehlermann (eds.), *EUROPEAN COMPETITION LAW ANNUAL: 2003*, (Hart Publishing, 2006); David S. Evans & Jorge Padilla, *Excessive Prices: Using Economics to Define Administrable Legal Rules*, *J. OF COMP. L. & ECON.* 2005; Christian Ahlborn, David S. Evans & Jorge Padilla, *The Logic and Limits of the Exceptional Circumstances Test in Magill and IMS Health*, *FORDHAM INT. L. J.*, 2005. David Ulph & Yannis Katsoulakos, *Optimal Legal Standards for Competition Policy*, *J. OF IND. ECON.*, 2009; David Ulph & Yannis Katsoulakos, *Optimal Enforcement Structures for Competition Policy: Implications of Judicial Reviews and of Internal Error Correction Mechanisms*, *EUROPEAN COMP. J.*, 2011; David Ulph & Yannis Katsoulakos, *Decision Errors, Legal Uncertainty and Welfare: a General Treatment*, *ECON. J.*, 2014; David Ulph & Yannis Katsoulakos, *Optimal Legal Standards for Competition Policy Further Re-Visited*, *ECON. LET.*, 2020.

(i.e., minimizing the cost of erroneous decisions).⁴⁷ They are easier to implement than the rule of reason or structured rule of reason standards and need not lead to more Type I or Type II errors. Yet, much more could and should be done to advance our understanding.⁴⁸

III. ASSESSING THE CRITICISMS

So, based on the above discussion, are antitrust economists guilty or innocent? While not everything points towards an innocence verdict, in my opinion the *preponderance of evidence* supports a finding of innocence. Let me explain this conclusion by reference to the three broad allegations considered above: ideological bias, undue complexity, and biased and non-administrable legal standards.

A. Ideological Bias?

As regards the allegations of ideological bias, my conclusion is mixed. On the one hand, I believe that the alleged under-enforcement of the competition laws cannot be blamed on the economists' focus on efficiency or on consumer welfare. How can anyone claim that there is under-enforcement (or else over-enforcement) without a proper benchmark? Does it make any sense to use a benchmark that blesses inefficiency? Who should pay for such inefficiencies? What about using a benchmark that promotes intervention (or else restraint) when such a policy is against the interests of consumers? If not consumers, who should benefit from competition law enforcement: competitors, regulators, the legal profession?

On the other hand, many economists, including me,⁴⁹ have erred when assuming that many markets, especially those where innovation is a key dimension of competition, will necessarily self-correct and will do so quickly. Some do, but others do not, either because of exogenous

⁴⁷ See Keynote Speech by Sir Geoffrey Vos Master of the Rolls and Head of Civil Justice AI – Transforming the work of lawyers and judges, at The Manchester Law Society AI Conference 2024: Transforming the Legal Landscape, available at - e.g. <https://www.judiciary.uk/speech-by-the-master-of-the-rolls-ai-transforming-the-work-of-lawyers-and-judges/>, discussing the possibility for AI tools to improve administrability of more complex approaches over time.

⁴⁸ See Ron Siegel & Bruno Strulovici, *Judicial Mechanism Design*, 15 AME. ECON. J. MICRO. 243–270 (2023), for a potential avenue for further research. See also Yannis Katsoulakos & Galateia Makri, *The role of economics and the type of legal standards in antitrust enforcement by DGCOMP: an empirical investigation*, 9 J. OF ANTITRUST ENFORC. 457-504 (2021), for an example of much needed empirical research on this area.

⁴⁹ See Christian Ahlborn, David S. Evans & Jorge Padilla, *Competition policy in the New Economy: Is European Competition Policy up to the challenge?*, EUR. COMP. L. REV. (2001).

or strategic barriers to entry. So, regulatory intervention may be needed to remove the exogenous barriers, and competition law enforcement required to deter or punish anti-competitive exclusionary strategies. Likewise, several economists, including me, should plead guilty of having placed too much emphasis on the “do no harm” principle. Indeed, though I am a bit more conservative than others, the consensus amongst economists seems to be that we should move from “do no harm” to “do good” in antitrust, recognizing the positive role that antitrust enforcement can play in shaping competitive markets, particularly in the context of digital markets and platform economies.⁵⁰

B. *Undue Complexity?*

I am also of the opinion that the alleged under-enforcement of the competition laws cannot be legitimately attributed to the use of complex mathematical models. The use of such tools is likely to have increased the cost of the enforcement; that much is true. Companies now have to answer detailed data requests and agencies need to undertake complex data analyses and scrutinize the work of the parties’ experts. But I am not aware of any evidence that convincingly shows that these efforts have not paid in terms of improved decision making.⁵¹

C. *Biased and Non-Administrable Legal Standards?*

As regards the allegation that reliance on the error-cost framework has caused the adoption of legal standards that have made it difficult, or impossible, to enforce the law at a reasonable cost, I have conflicting views. On the one hand, I do not regard the error cost framework to be biased in one direction or the other, and my own work has relied on that framework to advocate the use of rebuttable presumptions taking their administrability seriously.⁵² The error-cost framework is the best tool we have to identify optimal legal standards, in my opinion. Yet, I agree

⁵⁰ See Jonathan Baker, *THE ANTITRUST PARADIGM: RESTORING A COMPETITIVE ECONOMY*. (Har. U. Press, 2019.) See also Daniele Condorelli & Jorge Padilla, *Harnessing Platform Envelopment in the Digital World*, 16 J. OF COMP. L. & ECON. 143–187 (2020); and Daniele Condorelli & Jorge Padilla, *Data-Driven Envelopment with Privacy-Policy Tying*, 134 ECON. J. 515–537 (2024).

⁵¹ See Padilla (2023) *supra* note 4.

⁵² See Jorge Padilla, *Whither Article 102 TFEU*, 81 ANTITRUST L. J. 223–234 (2016).

that many economists' papers,⁵³ including some of my early work,⁵⁴ have defended the use of the structured rule of reason which has proved too costly and cumbersome, while neglecting the limitations of economic theory and empirics to make it work as well as the costs of administering such rules.

D. How Significant Is the Role Played by Antitrust Economics in Competition Enforcement?

The main reason why, in my opinion (not everyone agrees), the more-economic approach to antitrust is not responsible for the alleged under-enforcement of the law is because, in my experience, economics has played, and still plays, a limited role in that enforcement. It has grown over time, no doubt, and economists are involved to a much greater extent than twenty years ago; though this is mainly the case in merger control.

Economic considerations may be factored in when the agencies decide whether to open a case, but there are many other legal, political and institutional considerations that in my opinion carry more weight. Economics is used to screen out cases that the institution considers not worthy of attention.

When a case is launched, economic evidence is indeed considered, but only if the legal test makes it *unavoidable* and, in many instances, only to a limited extent and, mainly, when it does not conflict other sources of evidence, such as internal documents and the so-called “market test”—i.e., the opinion of competitors, customers and consumers.

Economic evidence plays a limited role especially in the assessment of agreements and in abuse of dominance cases is, and has been marginal, given that agencies tend to prioritize *object* infringements, the standard of proof for anti-competitive effects—where the agencies bear the burden of proof—is relatively low, and the standard of proof for efficiencies—where instead the defendant(s) bear the burden of proof—is typically very high.

⁵³ See Miguel de la Mano and Benoît Durand, *A Three-Step Structured Rule of Reason to Assess Predation under Article 82*, DG Competition, European Commission, Office of the Chief Economist Discussion Paper, available at https://ec.europa.eu/dgs/competition/economist/pred_art82.pdf.

⁵⁴ See Christian Ahlborn, David S. Evans & Jorge Padilla, *The Antitrust Economics of Tying: A Farewell to Per Se Illegality*, 49 ANTITRUST BULL. 287-341 (2004).

IV. WHITHER ANTITRUST ECONOMICS?

I have the impression that the growing perception among many, if not most, politicians and competition agencies, and certainly the media, is that the competition laws have indeed been under-enforced as a result of the adoption of the more-economic approach, and that this is placing freedom and equality in danger.

The call for a return to formalism; for the preservation of the existing, and the adoption of new, structural presumptions; for the generalization of the presumption of illegality in antitrust and merger control; etc.; is loud and clear. No economist—academic, consultant or a hybrid—can expect to be treated other than as a “hired gun” unless he or she goes along with the *zeitgeist*. This is not new. Stigler already explained that “[economists] are well-received in the measure that [they] preach what the society wishes to hear.”⁵⁵

Alas, as Kipling said, a life worth living requires us to trust ourselves when all people doubt us, while making allowance for their doubting too. In that spirit, it is incumbent upon us, antitrust economists, to invest time and effort in improving the tools of economic analysis for application in competition cases; reassessing the way antitrust economics is practiced; and providing suggestions to agencies and courts about how to assess economic evidence in a more effective and less costly way.

While this is not the paper to deal with such an ambitious agenda, let me suggest a few recommendations. We need to investigate the validity of our theories and the accuracy of our predictions by performing more post-mortem analyses. We need to separate more strictly the testifying expert from the consultant or advisor. We may require the former to back up her or his opinions by reference to her or his own published work, so that potential inconsistencies can be detected. We may recommend that agencies and courts publish non-confidential versions of all economic reports and request that all economic reports are signed by the authors. We should take more seriously that our analyses are only helpful if they can be understood and scrutinized by the decision makers.

Let us embrace the crisis, real or perceived, and use it as an opportunity to fulfil what Susan Haack terms as the scientist’s “epistemic responsibility—the duty to ensure that knowledge claims, especially those presented in legal contexts, are well-founded and transparent, ensuring that evidence is not only technically sound but also presented and interpreted in a manner that is accessible and fair”.⁵⁶

⁵⁵ See Stigler (1982) *supra* note **Error! Bookmark not defined.**

⁵⁶ See Susan Haack, *EVIDENCE MATTERS: SCIENCE, PROOF, AND TRUTH IN THE LAW*. (Cam. U. Press, 2014).