ROLES OF POSITIVE ECONOMICS IN ANTITRUST PROCEEDINGS: COMPETITIVE EFFECTS AS ADJUDICATIVE AND LEGISLATIVE FACTS

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ABSTRACT

There is a general agreement in the antitrust community that it will often be more efficient to use economics to develop an administrable rule for a category of cases than to carry out individual economic assessments for each of these cases. Yet, these two distinct roles performed by economics have in themselves received hardly any scholarly attention. The current article closes the gap, focusing in particular on economics-based determinations of competitive effects as arguably the most salient type of antitrust-relevant fact. The applied conceptual framework then associates the two roles of economics with the notorious distinction between adjudicative facts and legislative facts. The article shows that economic inquiries into competitive effects always need to be legally as well as substantively relevant, with the specific criteria of relevance depending on whether the effects concern the case under scrutiny or the rule under which the case is to be assessed. In particular, it only makes sense to determine the competitive effects of the business conduct at bar if the applicable rule associates lawfulness of the conduct with the effects; to be helpful to the decision-maker, the determination further needs to take sufficient account of the specificities of the given case. As regards determination of the applicable rule, competitive effects may become relevant only in so far as the decision-maker is not bound by a clear pre-existing rule; the decision-maker then needs to be provided with sufficient information about the distribution of competitive effects of the class of business conduct concerned.

INTRODUCTION

Antitrust is a field of law notoriously interconnected with economics. That however does not mean that economics is used in every single enforcement case to determine the competitive effects of the instance of conduct under scrutiny.[1] In fact, such a case-by-case approach would be

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[1] *See, e.g.*, Willard F. Mueller, *The Role of Economics in Antitrust Enforcement at the Federal Trade Commission*, 20 AMERICAN BAR ASSOCIATION ANTITRUST SECTION 20, 21 (1962) ("[T]here have been and will be many cases in which economists have made little or no contribution.").

inefficient because it would undermine deterrence by hindering predictability as well as require businesses and enforcers to expend too many resources. Similar observations lead Judge Easterbrook to argue that decisions as to whether market conduct infringes antitrust law should frequently be made for whole categories of the conduct rather than its particular instances.[2] Following suit, many respected commentators have suggested that it will often be socially optimal to use economics to develop rules that themselves anticipate only limited – if any – use of economics on the case level.[3] The ensuing question how to "best translate

[2] Frank H. Easterbrook, *Ignorance and Antitrust*, *in* ANTITRUST, INNOVATION, AND COMPETITIVENESS 119, 129 (Thomas M. Jorde & David J. Teece eds., 1992) ("Systemic knowledge may inform the rules that govern conduct – or may be ignored across the board – but to try to get every case economically right 'on its own facts' is to attempt the impossible and to wreak havoc in the process. . . . Do we then abandon antitrust? Hardly! We should instead use more widely the method we apply to cartels: per se rules based on ordinary effects, disdaining the search for the rare counterexamples. Ditch all attempts to domesticate a novel practice through the tools of litigation; redouble efforts to understand the *category* of similar practices of which the case is an example, and to devise a simple rule for adjudicating claims concerning the category. Decide whether the category is allowed or not at the level of rules, not of cases.").

[3] *See* Oliver Budzinski, *Modern Industrial Economics: Open Problems and Possible Limits*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 111, 128-29 (Josef Drexl, et al. eds., 2011) ("Many problems . . . result from the way modern industrial economics is employed – namely for in-depth case-by-case analyses. . . . In other words, modern industrial economics can be used in different ways: to quantify welfare effects of individual cases – but alternatively also to shape and design better rules codifying robust presumptions of anticompetitive impact that are subject to an in-depth 'rebuttal' analysis only in exceptional cases. Reasoning along these lines would advocate for combining modern industrial economics with modern institutional economics in order to create workable and beneficial competition policy system. . . . [T]here are sustainable limits to applying modern industrial economics as a case-by-case antitrust analysis that involves predictive economic evidence." (footnotes omitted)); Andrew I. Gavil, *Competition Policy, Economics and Economists: Are We Expecting Too Much?*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 2005 575, 590 (Barry E. Hawk ed., 2006) ("I will argue, therefore, for a flexible approach to embracing economic analysis – one that recognizes the continued value of presumptions, filters and other legal devices for abbreviating antitrust inquiries. It is essential to appreciate that these devices are not alternatives to economics analysis, but are in fact expressions of sound economic reasoning."); Geoffrey A. Manne & Joshua D. Wright, *Innovation and the Limits of Antitrust*, 6 JOURNAL OF COMPETITION LAW AND ECONOMICS 153, 196 (2010) ("The issue is where and how, within the set of antitrust enforcement institutions, we should allocate our economic knowledge. It is a question of when and where the economics is to be incorporated, not whether. Demanding that generalist judges evaluate state-of-the-art economic theory and evidence on a case-by-case basis is likely to prove a problematic approach to incorporating economic insights into the law. Instead, we favor an approach that is consistent with the spirit of Easterbrook's original filters, aimed at harnessing the best existing economic knowledge to design simple rules that minimize error costs."); Giorgio Monti, *EC Competition Law: The Dominance of Economic Analysis?*, *in* THE DEVELOPMENT OF COMPETITION LAW: GLOBAL PERSPECTIVES 3, 19 (Roger Zäch, et al. eds., 2010) ("[R]unning a fule scale economic analysis might be so costly as to outweigh the benefits of the final decision. Accordingly, an enforcement structure with formalistic

economic ideas into operative legal standards" has according to Gavil become central to the US antitrust debate.[4]

Given the centrality of the issue, it is surprising that antitrust scholarship has provided only a very limited understanding of the differences between using economics in deciding on the content of antitrust rules and in ascertainment of case facts to which the rules are to be applied.[5] To be sure, these roles of economics do get recognized by

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'black lists', 'white lists' and 'filters' is actually the 'expression of sound economic reasoning.'" (citing Andrew I. Gavil, *Competition Policy, Economics and Economists: Are We Expecting Too Much?*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 2005 575, 590 (Barry E. Hawk ed., 2006))); Jorge Padilla, *The Role of Economics in EU Competition Law: From Monti's Reform to the State Aid Modernization Package* 11-12 (Sept. 28, 2015) (unpublished working paper), *available at* https://ssrn.com/abstract=2666591 ("Economics may be more useful in designing "workable rules" than in balancing efficiencies against anticompetitive effects on a case-by-case basis. These rules may take the form of *rebuttable presumptions of legality*, according to which a business practice will be regarded as legal unless the plaintiff can demonstrate that certain economic conditions are met in practice, or *rebuttable presumptions of illegality*, whereby a practice will be regarded illegal unless the defendant can prove that certain economic conditions hold in that case. . . . Because courts and competition authorities are not populated by enlightened economists born and bred in the arcane business of balancing pro- and anticompetitive effects, provided such a species exist, and 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."); John Vickers, *Abuse of Market Power*, 115 ECONOMIC JOURNAL F244, F260 (2005) ("To say that the law on abuse of dominance should develop a stronger economic foundation is not to say that rules of law should be replaced by discretionary decision making based on whatever is thought to be desirable in economic terms case by case. 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.").

[4] Andrew I. Gavil, *Competition Policy, Economics and Economists: Are We Expecting Too Much?*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 2005 575, 195 (Barry E. Hawk ed., 2006).

[5] Economics gets to be used also in other types of antitrust decision-making exercises, including for instance detection of misconduct, *see, e.g.*, Lars-Hendrik Röller, *Economic Analysis and Competition Policy Enforcement in Europe*, *in* MODELLING EUROPEAN MERGERS THEORY, COMPETITION POLICY AND CASE STUDIES 11, 19 (Peter A. G. van Bergeijk, et al. eds., 2005); Maarten Pieter Schinkel, *Forensic Economics in Competition Law Enforcement*, 4 JOURNAL OF COMPETITION LAW AND ECONOMICS 1, 7 (2008), case selection, *see, e.g.*, Corwin D. Edwards, *Use and Abuse of Economics in Antitrust Litigation*, 20 AMERICAN BAR ASSOCIATION ANTITRUST SECTION 38, 40 (1962); Lewis Markus, *The Role of Economics in Department of Justice Enforcement of the Antitrust Laws*, 20 AMERICAN BAR ASSOCIATION ANTITRUST SECTION 13, 15 (1962), or design of leniency programs, *see, e.g.*, Jeroen Hinloopen, *An Economic Analysis of Leniency Programs in Antitrust Law*, 151 DE ECONOMIST 415 (2003); Damien J. Neven, *Competition Economics and Antitrust in Europe*, 21 ECONOMIC POLICY 743, 746 (2006). These uses are not entertained by the current article.

antitrust commentary,[6] with the formulations used to describe them

[6] *See, e.g.*, DORIS HILDEBRAND, THE ROLE OF ECONOMIC ANALYSIS IN THE EC COMPETITION RULES 3 (3d ed. 2009) ("Economics in . . . competition rules comes into play twice: first, in the design of the . . . competition rules and secondly, in their application."); Jonathan B. Baker & Timothy F. Bresnahan, *Economic Evidence in Antitrust: Defining Markets and Measuring Market Power*, *in* HANDBOOK OF ANTITRUST ECONOMICS 1, 2 (Paolo Buccirossi ed., 2008) ("The importance of economics is most evident when antitrust cases are resolved in litigation. In deciding individual cases, courts routinely undertake a detailed economic inquiry into the nature of competition and the effect of challenged practices on that competition. . . . Economic reasoning also plays an important role in framing legal rules."); Jonathan B. Baker, *Economics and Politics: Perspectives on the Goals and Future of Antitrust*, 81 FORDHAM LAW REVIEW 2175, 2175 (2013) ("Any modem antitrust practitioner would recognize the central role of economics in competition policy and case evaluation."); Stephen Breyer, *Economics for Lawyers and Judges*, 33 JOURNAL OF LEGAL EDUCATION 294, 295 (1983) ("Let me now distinguish between two different ways in which economics relates to the legal disciplines of antitrust and economic regulation. First, economics directly influences the content of the rules of law in those fields. . . . Second, those who practice in these fields must prove specific economic facts related to individual cases." (emphasis and footnotes omitted)); Oliver Budzinski, *Modern Industrial Economics: Open Problems and Possible Limits*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 111, 129 (Josef Drexl, et al. eds., 2011) ("[M]odern industrial economics can be used in different ways: to quantify welfare effects of individual cases – but alternatively also to shape and design better rules . . . ."); Arndt Christiansen & Wolfgang Kerber, *Competition Policy with Optimally Differentiated Rules Instead of "Per se Rules vs Rule of Reason"*, 2 JOURNAL OF COMPETITION LAW AND ECONOMICS 215, 236 (2006) ("From our law and economics perspective, economics can be applied on two different levels: (1) economic knowledge can be used for the formulation of competition rules, both with regard to the optimal degree of rule differentiation and the appropriate set of assessment criteria; (2) for deciding individual cases, economic analysis can be applied in order to assess the particular case-specific positive and negative welfare effects, e.g. by using econometric studies."); Arndt Christiansen & Christian Ewald, *Best Practices for Expert Economic Opinions – Key Element of Forensic Economics in Competition Law*, *in* PUBLIC AND PRIVATE ENFORCEMENT OF COMPETITION LAW IN EUROPE 141, 143 (Kai Hüschelrath & Heike Schweitzer eds., 2014) ("Economics heavily influences competition law at distinct stages – namely, in the formulation of rules (including guidelines) and in the analysis of individual cases."); Justine Coombs & Jorge Padilla, *The Use of Economic Evidence before the Courts of the European Union*, *in* EUROPEAN COMPETITION LAW ANNUAL 2009: THE EVALUATION OF EVIDENCE AND ITS JUDICIAL REVIEW IN COMPETITION CASES 473, 474 (Claus-Dieter Ehlermann & Mel Marquis eds., 2011) ("Economics can influence competition law at three stages: in the design of laws, in the creation of guidelines on the application of the law and systems of prioritisation, and in the actual application of the law to individual cases."); James V. DeLong, *The Role, if any, of Economic Analysis in Antitrust Litigation*, 12 SOUTHWESTERN UNIVERSITY LAW REVIEW 298, 332 (1981) ("There is a difference between a lower court using economic evidence to resolve specific issues arising under settled rules and a court, especially the Supreme Court, using economic concepts in the course of considering what rules to adopt."); Corwin D. Edwards, *Use and Abuse of Economics in Antitrust Litigation*, 20 AMERICAN BAR ASSOCIATION ANTITRUST SECTION 38, 40 (1962) ("There is still need for a great deal of economic thinking and for resort to economists in the development of the cases. The need appears at three points: In the selection of cases, in the development and evaluation of evidence, and in the development of standards by which legality is judged."); Hans W. Friederiszick, *Economic Analysis in EU Competition Cases*, *in*

varying markedly: On the one hand, economics is said to influence the content of antitrust rules[7] (sometimes also referred to as antitrust or

ECONOMIC THEORY AND COMPETITION LAW 3, 3 (Josef Drexl, et al. eds., 2009) ("Economic analysis can play an important role in three different fields: improving existing rules, analysing individual cases and ex-post analysis of the effectiveness of the intervention."); David J. Gerber, *Global Competition Law Convergence: Potential Roles for Economics*, *in* COMPARATIVE LAW AND ECONOMICS 206, 229 (Theodore Eisenberg & Giovanni B. Ramello eds., 2016) ("Economic methods can be used to shape both stated norms of conduct and the application and enforcement of these standards."); Laurence Idot, *Modern Industrial Economics Revisited – Comments on Daniel Rubinfeld, Michele Polo and Oliver Budzinski*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 139, 140-41 (Josef Drexl, et al. eds., 2011) (observing that economics can intervene on the "rule-making level" as well as the "case-making level"); William E. Kovacic, *The Influence of Economics on Antitrust Law*, 30 ECONOMIC INQUIRY 294, 294 (1992) ("Economists today play prominent roles in formulating antitrust policy and litigating antitrust cases."); Christopher R. Leslie, *Can Antitrust Law Incorporate Insights from Behavioral Economics?*, 92 TEXAS LAW REVIEW 53, 63 (2014) (advocating the necessity "to recognize the distinction between adjudicative fact-finding and economic policymaking" with regard to antitrust economics); Ioannis Lianos, *'Judging' Economists: Economic Expertise in Competition Law Litigation: A European View*, *in* THE REFORM OF EC COMPETITION LAW: NEW CHALLENGES 185, 187-88 (Ioannis Lianos & Ioannis Kokkoris eds., 2010) (distinguishing between the indirect influence of economics on antitrust case decisions through creation of rules and the direct influence through provision of economic expertise in litigation); John E. Lopatka & William H. Page, *Economic Authority and the Limits of Expertise in Antitrust Cases*, 90 CORNELL LAW REVIEW 617, 639 (2005) (discussing "how courts make use of economic authority in formulating and applying antitrust rules"); Mark S. Massel, *Legal and Economic Aspects of Competition*, 1960 DUKE LAW JOURNAL 157, 158 (1960) (distinguishing between the use of economics in "development and administration of . . . antitrust laws"); Giorgio Monti, *EC Competition Law: The Dominance of Economic Analysis?*, *in* THE DEVELOPMENT OF COMPETITION LAW: GLOBAL PERSPECTIVES 3, 4 (Roger Zäch, et al. eds., 2010) (noting that economics plays a role in the following "dimensions of the decision-making function in a regulatory sphere: design of rules, the application of rules to a given scenario, and their enforcement"). Luis Ortiz Blanco & Alfonso Lamadrid de Pablo, *Expert Economic Evidence and Effects-based Assessments in Competition Law Cases*, *in* THE ROLE OF THE COURT OF JUSTICE OF THE EUROPEAN UNION IN COMPETITION LAW CASES 305, 308 (Massimo Merola & Jacques Derenne eds., 2012) ("When dealing with the influence of economics in competition law cases one must distinguish the design of legal rules from the enforcement thereof."); Maarten Pieter Schinkel, *Forensic Economics in Competition Law Enforcement*, 4 JOURNAL OF COMPETITION LAW AND ECONOMICS 1, 2 (2008) ("Insights from the discipline of industrial organization (IO) in particular are extensively used in the interpretation and the enforcement of the competition laws.").

[7] *E.g.* Stephen Breyer, *Economics for Lawyers and Judges*, 33 JOURNAL OF LEGAL EDUCATION 294, 295 (1983).

competition policy[8]) or, in other words, be useful in their design[9] (formulation,[10] making,[11] adoption,[12] framing,[13] shaping,[14]

[8] *E.g.* Jonathan B. Baker, *Economics and Politics: Perspectives on the Goals and Future of Antitrust*, 81 FORDHAM LAW REVIEW 2175, 2175 (2013); William E. Kovacic, *The Influence of Economics on Antitrust Law*, 30 ECONOMIC INQUIRY 294, 294 (1992); Christopher R. Leslie, *Can Antitrust Law Incorporate Insights from Behavioral Economics?*, 92 TEXAS LAW REVIEW 53, 63 (2014); Mark S. Massel, *Legal and Economic Aspects of Competition*, 1960 DUKE LAW JOURNAL 157, passim (1960). I do not use this term below because antitrust policy may include not only antitrust rules but also other tools such as advocacy.

[9] *E.g.* DORIS HILDEBRAND, THE ROLE OF ECONOMIC ANALYSIS IN THE EC COMPETITION RULES 3 (3d ed. 2009); Oliver Budzinski, *Modern Industrial Economics: Open Problems and Possible Limits*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 111, 129 (Josef Drexl, et al. eds., 2011); Justine Coombs & Jorge Padilla, *The Use of Economic Evidence before the Courts of the European Union*, *in* EUROPEAN COMPETITION LAW ANNUAL 2009: THE EVALUATION OF EVIDENCE AND ITS JUDICIAL REVIEW IN COMPETITION CASES 473, 474 (Claus-Dieter Ehlermann & Mel Marquis eds., 2011); Giorgio Monti, *EC Competition Law: The Dominance of Economic Analysis?*, *in* THE DEVELOPMENT OF COMPETITION LAW: GLOBAL PERSPECTIVES 3, 4 (Roger Zäch, et al. eds., 2010); Luis Ortiz Blanco & Alfonso Lamadrid de Pablo, *Expert Economic Evidence and Effects-based Assessments in Competition Law Cases*, *in* THE ROLE OF THE COURT OF JUSTICE OF THE EUROPEAN UNION IN COMPETITION LAW CASES 305, 308 (Massimo Merola & Jacques Derenne eds., 2012).

[10] *E.g.* Maureen Brunt, *Antitrust in the Courts: The Role of Economics and of Economists*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 1998 357, 357 (Barry E. Hawk ed., 1999); Arndt Christiansen & Wolfgang Kerber, *Competition Policy with Optimally Differentiated Rules Instead of "Per se Rules vs Rule of Reason"*, 2 JOURNAL OF COMPETITION LAW AND ECONOMICS 215, 236 (2006); Arndt Christiansen & Christian Ewald, *Best Practices for Expert Economic Opinions – Key Element of Forensic Economics in Competition Law*, *in* PUBLIC AND PRIVATE ENFORCEMENT OF COMPETITION LAW IN EUROPE 141, 143 (Kai Hüschelrath & Heike Schweitzer eds., 2014); William E. Kovacic, *The Influence of Economics on Antitrust Law*, 30 ECONOMIC INQUIRY 294, 294 (1992); John E. Lopatka & William H. Page, *Economic Authority and the Limits of Expertise in Antitrust Cases*, 90 CORNELL LAW REVIEW 617, 639 (2005).

[11] *E.g.* Laurence Idot, *Modern Industrial Economics Revisited – Comments on Daniel Rubinfeld, Michele Polo and Oliver Budzinski*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 139, 140-41 (Josef Drexl, et al. eds., 2011); Christopher R. Leslie, *Can Antitrust Law Incorporate Insights from Behavioral Economics?*, 92 TEXAS LAW REVIEW 53, 63 (2014).

[12] *E.g.* James V. DeLong, *The Role, if any, of Economic Analysis in Antitrust Litigation*, 12 SOUTHWESTERN UNIVERSITY LAW REVIEW 298, 332 (1981).

[13] *E.g.* Jonathan B. Baker & Timothy F. Bresnahan, *Economic Evidence in Antitrust: Defining Markets and Measuring Market Power*, *in* HANDBOOK OF ANTITRUST ECONOMICS 1, 2 (Paolo Buccirossi ed., 2008).

[14] *E.g.* Oliver Budzinski, *Modern Industrial Economics: Open Problems and Possible Limits*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 111, 129 (Josef Drexl, et al. eds., 2011); David J. Gerber, *Global Competition Law Convergence: Potential Roles for Economics*, *in* COMPARATIVE LAW AND ECONOMICS 206, 229 (Theodore Eisenberg & Giovanni B. Ramello eds., 2016).

development,[15] improving[16] etc.), and eventually also their interpretation.[17] On the other hand, the commentary maintains that economics can as well be used in application of these rules[18] (to individual cases[19]), also called their administration[20] or enforcement,[21] in resolution of specific issues arising under the rules,[22] in proving specific economic facts related to individual cases,[23] in deciding individual cases,[24] in

[15] *E.g.* Corwin D. Edwards, *Use and Abuse of Economics in Antitrust Litigation*, 20 AMERICAN BAR ASSOCIATION ANTITRUST SECTION 38, 40 (1962); Mark S. Massel, *Legal and Economic Aspects of Competition*, 1960 DUKE LAW JOURNAL 157, 158 (1960).

[16] *E.g.* Hans W. Friederiszick, *Economic Analysis in EU Competition Cases*, *in* ECONOMIC THEORY AND COMPETITION LAW 3, 3 (Josef Drexl, et al. eds., 2009).

[17] *E.g.* Maarten Pieter Schinkel, *Forensic Economics in Competition Law Enforcement*, 4 JOURNAL OF COMPETITION LAW AND ECONOMICS 1, 2 (2008).

[18] *E.g.* DORIS HILDEBRAND, THE ROLE OF ECONOMIC ANALYSIS IN THE EC COMPETITION RULES 3 (3d ed. 2009); Corwin D. Edwards, *Use and Abuse of Economics in Antitrust Litigation*, 20 AMERICAN BAR ASSOCIATION ANTITRUST SECTION 38, 40 (1962); David J. Gerber, *Global Competition Law Convergence: Potential Roles for Economics*, *in* COMPARATIVE LAW AND ECONOMICS 206, 229 (Theodore Eisenberg & Giovanni B. Ramello eds., 2016); John E. Lopatka & William H. Page, *Economic Authority and the Limits of Expertise in Antitrust Cases*, 90 CORNELL LAW REVIEW 617, 639 (2005).

[19] *E.g.* Justine Coombs & Jorge Padilla, *The Use of Economic Evidence before the Courts of the European Union*, *in* EUROPEAN COMPETITION LAW ANNUAL 2009: THE EVALUATION OF EVIDENCE AND ITS JUDICIAL REVIEW IN COMPETITION CASES 473, 474 (Claus-Dieter Ehlermann & Mel Marquis eds., 2011); Giorgio Monti, *EC Competition Law: The Dominance of Economic Analysis?*, *in* THE DEVELOPMENT OF COMPETITION LAW: GLOBAL PERSPECTIVES 3, 4 (Roger Zäch, et al. eds., 2010).

[20] *E.g.* Mark S. Massel, *Legal and Economic Aspects of Competition*, 1960 DUKE LAW JOURNAL 157, 158 (1960).

[21] *E.g.* David J. Gerber, *Global Competition Law Convergence: Potential Roles for Economics*, *in* COMPARATIVE LAW AND ECONOMICS 206, 229 (Theodore Eisenberg & Giovanni B. Ramello eds., 2016); Giorgio Monti, *EC Competition Law: The Dominance of Economic Analysis?*, *in* THE DEVELOPMENT OF COMPETITION LAW: GLOBAL PERSPECTIVES 3, 4 (Roger Zäch, et al. eds., 2010); Luis Ortiz Blanco & Alfonso Lamadrid de Pablo, *Expert Economic Evidence and Effects-based Assessments in Competition Law Cases*, *in* THE ROLE OF THE COURT OF JUSTICE OF THE EUROPEAN UNION IN COMPETITION LAW CASES 305, 308 (Massimo Merola & Jacques Derenne eds., 2012); Maarten Pieter Schinkel, *Forensic Economics in Competition Law Enforcement*, 4 JOURNAL OF COMPETITION LAW AND ECONOMICS 1, 2 (2008).

[22] *E.g.* James V. DeLong, *The Role, if any, of Economic Analysis in Antitrust Litigation*, 12 SOUTHWESTERN UNIVERSITY LAW REVIEW 298, 332 (1981).

[23] *E.g.* Stephen Breyer, *Economics for Lawyers and Judges*, 33 JOURNAL OF LEGAL EDUCATION 294, 295 (1983).

[24] *E.g.* Jonathan B. Baker & Timothy F. Bresnahan, *Economic Evidence in Antitrust: Defining Markets and Measuring Market Power*, *in* HANDBOOK OF ANTITRUST ECONOMICS 1, 2 (Paolo Buccirossi ed., 2008); Arndt Christiansen & Wolfgang Kerber, *Competition Policy with Optimally Differentiated Rules Instead of "Per se Rules vs Rule of Reason"*, 2 JOURNAL OF COMPETITION LAW AND ECONOMICS 215, 236 (2006).

analysis of individual cases,[25] in litigation[26] (of individual cases[27]), in case evaluation[28] or in "case-making."[29] Nevertheless, a careful review of the antitrust discourse reveals that the recognition of these two roles of economics has not been followed by their detailed examination, and that the distinction is far from being fully appreciated.[30]

This poses a serious problem. As cautioned by Massel already six decades ago, insufficient appreciation of the differences between the concerned roles of economics may limit the very contribution made by this discipline to antitrust decision-making.[31] Unless heed is paid to the aims and limitations associated with each of the roles, he argues, "the tools of economic analysis will not be utilized adequately."[32] In other

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[25] *E.g.* Oliver Budzinski, *Modern Industrial Economics: Open Problems and Possible Limits*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 111, 129 (Josef Drexl, et al. eds., 2011); Arndt Christiansen & Christian Ewald, *Best Practices for Expert Economic Opinions – Key Element of Forensic Economics in Competition Law*, *in* PUBLIC AND PRIVATE ENFORCEMENT OF COMPETITION LAW IN EUROPE 141, 143 (Kai Hüschelrath & Heike Schweitzer eds., 2014); Hans W. Friederiszick, *Economic Analysis in EU Competition Cases*, *in* ECONOMIC THEORY AND COMPETITION LAW 3, 3 (Josef Drexl, et al. eds., 2009).

[26] *E.g.* Ioannis Lianos, *'Judging' Economists: Economic Expertise in Competition Law Litigation: A European View*, *in* THE REFORM OF EC COMPETITION LAW: NEW CHALLENGES 185, 188 (Ioannis Lianos & Ioannis Kokkoris eds., 2010).

[27] *E.g.* Jonathan B. Baker & Timothy F. Bresnahan, *Economic Evidence in Antitrust: Defining Markets and Measuring Market Power*, *in* HANDBOOK OF ANTITRUST ECONOMICS 1, 2 (Paolo Buccirossi ed., 2008).

[28] *E.g.* Jonathan B. Baker, *Economics and Politics: Perspectives on the Goals and Future of Antitrust*, 81 FORDHAM LAW REVIEW 2175, 2175 (2013).

[29] *E.g.* Laurence Idot, *Modern Industrial Economics Revisited – Comments on Daniel Rubinfeld, Michele Polo and Oliver Budzinski*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 139, 140-41 (Josef Drexl, et al. eds., 2011). This role of economics is also sometimes referred to as its use in "fact-finding." *See, e.g.*, Christopher R. Leslie, *Can Antitrust Law Incorporate Insights from Behavioral Economics?*, 92 TEXAS LAW REVIEW 53, 63 (2014). This term is nevertheless potentially misleading because it is regularly used also in respect to the previous role. *See, e.g.*, ANGELO N. ANCHETA, SCIENTIFIC EVIDENCE AND EQUAL PROTECTION OF THE LAW 5 (2006) (speaking about "legislative fact finding"); Caitlin E. Borgmann, *Rethinking Judicial Deference to Legislative Fact-finding*, 84 INDIANA LAW JOURNAL 1, passim (2009) (speaking about "legislative fact-finding"); Daniel A. Crane, *Enacted Legislative Findings and the Deference Problem*, 102 GEORGETOWN LAW JOURNAL 637, passim (2014) (discussing congressional fact-finding).

[30] *See, e.g.*, Mark S. Massel, *Legal and Economic Aspects of Competition*, 1960 DUKE LAW JOURNAL 157, 158, 60, 75-76, 94-95 (1960) (observing that some participants to antitrust decision-making fail to appreciate the distinction between "development and administration of our antitrust laws" and, thus, also between the two different ways of using economics in the context of antitrust law).

[31] *Id.* at 160; *see also* Christopher R. Leslie, *Can Antitrust Law Incorporate Insights from Behavioral Economics?*, 92 TEXAS LAW REVIEW 53, 63 (2014) ("Many of the arguments against employing behavioral economics in antitrust analysis are flawed because they fail to recognize the distinction between adjudicative fact-finding and economic policymaking.").

[32] Mark S. Massel, *Legal and Economic Aspects of Competition*, 1960 DUKE LAW

words, much like antitrust decision-making may get skewed due to an inadequate understanding of economic methods and theories, it may as well suffer from insufficient appreciation of the different purposes to which they are employed by the law. The present article responds to the call for a greater attention to the doctrinal differences between the antitrust functions of economics,[33] carefully delineating the functions and identifying the limits imposed on them by the very structure of legal decision-making. By doing so, the article not only enhances a general understanding of this complex matter but also facilitates more accurate decisions by antitrust agencies and courts.[34]

At first blush, the two concerned roles of economics may seem to correspond to the familiar categories of normative and positive economics – normative economics being under this view used in determination of the law governing the case and positive economics in ascertainment of the facts of the case. Upon a closer inspection, however, the issue proves to be less trivial than that. Namely, as regards just the determination of antitrust rules, economics is able to contribute in three different ways.[35] First, economics has been said to influence the content of the rules by proposing the objective – in particular welfare – to be pursued by antitrust

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JOURNAL 157, 160 (1960).

[33] This call has repeatedly been made also by Gerber. *See* David J. Gerber, *The Future of Article 82: Dissecting the Conflict*, *in* EUROPEAN COMPETITION LAW ANNUAL 2007: A REFORMED APPROACH TO ARTICLE 82 37, 48 (Claus-Dieter Ehlermann & Mel Marquis eds., 2008); David J. Gerber, *Searching for a Modernized Voice: Economics, Institutions, and Predictability in European Competition Law*, 37 FORDHAM INTERNATIONAL LAW JOURNAL 1421, 1439 (2014); David J. Gerber, *Global Competition Law Convergence: Potential Roles for Economics*, *in* COMPARATIVE LAW AND ECONOMICS 206, 216 (Theodore Eisenberg & Giovanni B. Ramello eds., 2016)

[34] *See, e.g.*, Patricia M. Wald, *Judicial Review of Economics Analyses*, 43 YALE JOURNAL ON REGULATION 43, 49 (1983) ("In any particular case it is necessary to identify the nature and function of economic analysis in the relevant statutory scheme. The various statutory roles that economic analyses can play have implications for the appropriate level of judicial scrutiny.").

[35] For a discussion on the distinction between normative, positive and prescriptive economics see Kalle Määttä, *Law and Economics from Lawyers' Point of View*, *in* LAW AND ECONOMICS: ESSAYS IN HONOUR OF ERLING EIDE 131, 132 (Erik Røsæg, et al. eds., 2010). Prescriptive economics gets sometimes also called "the art of economics." *See* David Colander, *Retrospectives: The Lost Art of Economics*, 6 JOURNAL OF ECONOMIC PERSPECTIVES 191, 191 (1992) (attributing the term to John Neville Keynes). To explain the prescriptive use of economics, Vanberg employs the concept of a hypothetical imperative: Such an imperative provides prudential advice for what the suitable means are to achieve a predefined purpose. As a result, hypothetical imperatives proposed by prescriptive economics can be rationally examined, while so-called categorical imperatives proposed by normative economics cannot. Viktor J. Vanberg, *Consumer Welfare, Total Welfare and Economic Freedom – On the Normative Foundations of Economic Policy*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 44, 45-47 (Josef Drexl, et al. eds., 2011). Some antitrust commentators seem to understand the prescriptive role of economics as a counterpart to economics-based determination of adjudicative facts..

law (normative economics in a narrow sense).[36] Second, economics may also provide information about facts relevant to formulation and interpretation of the rules (positive economics).[37] Third, economics may take goals and facts as given and propose optimal antitrust rules (prescriptive economics). The current article engages neither the contribution of economists in respect to selection of the objective to be pursued by antitrust nor to development of optimal rules. Instead, it focuses exclusively on using economics in determination of antitrust-relevant facts.

The focus on facts is what distinguishes this article from other commentary on the difference between using economics with regard to facts of the case and with regard to the applicable rule.[38] It is also a reason why the two roles of economics at stake in this article do not coincide with what Dunoff and Trachtman have called economic analysis *in* law

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[36] *See, e.g.*, Roger D. Blair & D. Daniel Sokol, *The Rule of Reason and the Goals of Antitrust: An Economic Approach*, 78 ANTITRUST LAW JOURNAL 471, 473 (2012) ("The goal of antitrust, as understood by economic analysis, involves a choice of either total welfare or consumer welfare."). *But see* Paolo Buccirossi, *Introduction*, *in* HANDBOOK OF ANTITRUST ECONOMICS ix, xiv-xv (Paolo Buccirossi ed., 2008) ("Although I do not have any reliable statistics, my educated guess is that among economists the opinion that the ultimate goal of antitrust law should be to promote total welfare (allocative efficiency) prevails. . . . The controversy boils down to the question of whether distributive issues should matter for the application of competition law. As pointed out by Martin (2006), this is a genuine policy question that cannot and should not be solved by economists." (footnotes omitted) (citing Stephen Martin, *The Goals of Antitrust and Competition Policy*, *in* I ISSUES IN COMPETITION LAW AND ECONOMICS (ABA Section of Antitrust Law ed., 2008))); Daniel Zimmer, *Protection of Competition v. Maximizing (Consumer) Welfare*, *in* STRUCTURE AND EFFECTS IN EU COMPETITION LAW: STUDIES ON EXCLUSIONARY CONDUCT AND STATE AID 23, 31 (Jürgen Basedow & Wolfgang Wurmnest eds., 2011) ("Whether competition law is to serve such goals as efficiency and consumer welfare is – obviously – a normative question and, as such, a policy question. Economics, as a positive discipline, can provide no answer to policy questions.").

[37] *See, e.g.*, John M. Blair, *Lawyers and Economists in Antitrust: A Marriage of Necessity, if Not Convenience*, 20 AMERICAN BAR ASSOCIATION ANTITRUST SECTION 29, 29 (1962) ("[I]t is the function of economists in the antitrust field to assist . . . in shedding light on issues which have troubled policy-makers in this field for generations and in developing a factual foundation on which new and more effective policies can be based.").

[38] *See, e.g.*, David J. Gerber, *The Future of Article 82: Dissecting the Conflict*, *in* EUROPEAN COMPETITION LAW ANNUAL 2007: A REFORMED APPROACH TO ARTICLE 82 37, 48-49 (Claus-Dieter Ehlermann & Mel Marquis eds., 2008) (distinguishing between using economics to ascertain case facts and to "provide[] the norms of conduct"); Michael A. Salinger, *The Legacy of Matsushita: The Role of Economics in Antitrust Litigation*, 38 LOYOLA UNIVERSITY CHICAGO LAW JOURNAL 475, 476 (2007) ("[T]he decision can be read to create two possible roles for economics. One, henceforth the 'microanalytic' role, would be to present each case in terms of a formal economic model. In contrast, a 'decision theoretic' role would entail creating simple rules based on the recognition that economic analysis is inherently imprecise and that errors are inevitable.").

and economic analysis *of* law.[39] While the former notion does correspond with economics-based ascertainment of case facts, the latter is in two respects broader in scope than the rule-related role considered here: First, Dunoff and Trachtman's economics analysis of law includes not only practical analyses aimed to inform decision-making, but also scholarly economics-based "study of legal institutions and doctrines."[40] Second, the term refers not only to positive but also normative and prescriptive economics.

The most salient antitrust facts are *competitive effects*.[41] These are the effects exerted by relevant conduct of powerful firms onto their rivals, business partners and consumers. Since the main goal of antitrust is prevention of the adverse variety of competitive effects,[42] their ascertainment constitutes a fundamental part of antitrust decision-making. With economic tools being most pertinent for this ascertainment,[43] it is

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[39] Jeffrey L. Dunoff & Joel P. Trachtman, *Economic Analysis of International Law*, 24 YALE JOURNAL OF INTERNATIONAL LAW 1, 6-7 (1999); *see also* Stephen Breyer, *Economics for Lawyers and Judges*, 33 JOURNAL OF LEGAL EDUCATION 294, 295 (1983); Alvin K. Klevorick, *Law and Economic Theory: An Economist's View*, 65 AMERICAN ECONOMIC REVIEW 237, 237-39 (1975); George J. Stigler, *Law or Economics?*, 35 JOURNAL OF LAW AND ECONOMICS 455, 466-67 (1992).

[40] George J. Stigler, *Law or Economics?*, 35 JOURNAL OF LAW AND ECONOMICS 455, 467 (1992)

[41] *See* Steven C. Salop, *The First Principles Approach to Antitrust, Kodak, and Antitrust at the Millennium*, 68 ANTITRUST LAW JOURNAL 187, 188 (2000) ("[C]ompetitive effect is the true core of antitrust."). There are nevertheless also many other types of facts relevant to antitrust decision-making. *See, e.g.*, Jan Broulík, *Two Contexts for Economics in Competition Law: Deterrence Effects and Competitive Effects*, *in* NEW DEVELOPMENTS IN COMPETITION LAW AND ECONOMICS (Klaus Mathis & Avishalom Tor eds., 2019) (distinguishing between deterrence effects and competitive effects as two major types of facts relevant for antitrust decision-making that economics may provide information about); *infra* note 70 and accompanying text.

[42] *See, e.g.*, Bd. of Trade of the City of Chicago v. United States, 246 U.S. 231, 238 (1918). ("The true test for legality is whether the restraint imposed is such as merely regulates and perhaps thereby promotes competition or whether it is such as may suppress or even destroy competition. To determine that question the court must ordinarily consider the facts peculiar to the business to which the restraint is applied; its condition before and after the restraint was imposed; the nature of the restraint and its *effect*, actual or probable." (emphasis added)); N. Pac. Ry. Co. v. United States, 356 U.S. 1, 5 (1958) ("[T]here are certain agreements or practices which because of their pernicious *effect on competition* and lack of any redeeming virtue are conclusively presumed to be unreasonable and therefore illegal without elaborate inquiry as to the precise harm they have caused or the business excuse for their use." (emphasis added)); Matthew Bennett, et al., *Resale Price Maintenance: Explaining the Controversy, and Small Steps Towards a More Nuanced Policy*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 2009 497, 499 (Barry E. Hawk ed., 2010) ("[A] key objective of any system of competition law should be to prevent firms from: engaging in practices and signing agreements which appreciably prevent, restrict or distort competition . . . .").

[43] *See* Luke M. Froeb, et al., *The Economics of Organizing Economists*, 76 ANTITRUST LAW JOURNAL 569, 573 (2009) ("Economic methodology is particularly well suited for predicting the causal effects of business practices . . . ."); David J. Gerber,

also where economics finds its arguably most important antitrust use.[44] In other words, to examine how information about competitive effects is useful in antitrust decision-making is also to examine how economics is. The current article thus seeks to narrow the gap that exists in understanding of the two antitrust roles of economics by studying its employment in antitrust determinations of competitive effects.

To study the role of competitive effects in antitrust decision-making, this article relies on the doctrinal distinction between *adjudicative facts* and *legislative facts*, which are to be understood as facts used to resolve questions of fact and law, respectively;[45] the concepts are further elaborated below.[46] Although this distinction has made its way into many other legal fields and generally has become "the established vocabulary for describing the kinds of facts that are relevant to legal discourse,"[47] it has received virtually no consideration in the context of antitrust law and economics.[48] As demonstrated below, this is unfortunate because the distinction offers a particularly useful framework facilitating a better understanding of the two antitrust roles performed by economics. It ought

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The Future of Article 82: Dissecting the Conflict, *in* EUROPEAN COMPETITION LAW ANNUAL 2007: A REFORMED APPROACH TO ARTICLE 82 37, 48 (Claus-Dieter Ehlermann & Mel Marquis eds., 2008) ("Competition law norms refer to the effects of particular conduct, and economic science can be used to assess such effects more precisely, more effectively and with greater methodological stability than is otherwise possible.").

[44] *Cf.* Arndt Christiansen & Christian Ewald, *Best Practices for Expert Economic Opinions – Key Element of Forensic Economics in Competition Law*, *in* PUBLIC AND PRIVATE ENFORCEMENT OF COMPETITION LAW IN EUROPE 141, 144 (Kai Hüschelrath & Heike Schweitzer eds., 2014) (arguing that "the task of forensic economics in public competition law enforcement is to assess the competitive effects of firm behaviour").

[45] II KENNETH CULP DAVIS & RICHARD J. PIERCE, JR., ADMINISTRATIVE LAW TREATISE §10.4 141 (3d ed. 1994) ("Legislative facts . . . help the tribunal decide questions of law and policy and discretion."); 1 CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, FEDERAL EVIDENCE §48 260 (2d ed. 1994) ("[A]djudicative facts are those that are required to prove, or are used to prove, a question of fact as distinguished from a question of law."); CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, EVIDENCE §2.2 66 (4th ed. 2009) (defining adjudicative facts as "those facts that are necessary to prove or are used to prove a question of fact as distinguished from a question of law").

[46] *Infra* Part I.

[47] DAVID L. FAIGMAN, CONSTITUTIONAL FICTIONS: A UNIFIED THEORY OF CONSTITUTIONAL FACTS 46 (2008). *See also infra* notes 133 and 134 and accompanying text.

[48] A notable exception is Michael Boudin, *Evidence and the Formulation of U.S. Antitrust Law*, *in* EUROPEAN COMPETITION LAW ANNUAL 2009: THE EVALUATION OF EVIDENCE AND ITS JUDICIAL REVIEW IN COMPETITION CASES 665 (Claus-Dieter Ehlermann & Mel Marquis eds., 2011) (considering lay testimony, scholarship and experts as three sources of economic facts and attempting to categorize them as adjudicative or legislative). The distinction is briefly mentioned also by Rebecca Haw Allensworth, *Law and the Art of Modeling: Are Models Facts?*, 103 GEORGETOWN LAW JOURNAL 825 (2015); Herbert Hovenkamp, *Fact, Value and Theory in Antitrust Adjudication*, 1987 DUKE LAW JOURNAL 897 (1987); John E. Lopatka & William H. Page, *Economic Authority and the Limits of Expertise in Antitrust Cases*, 90 CORNELL LAW REVIEW 617 (2005).

to be spelled out at the outset that – with its main focus being explication of the two antitrust roles played by economics and of their inherent limits – the article primarily relies on an analytical understanding of the line dividing the two types of facts. One should nevertheless be aware that fact classification gets in practice often distorted by pragmatic considerations; in order to provide context, the article provides also a brief discussion thereof.[49]

The scope of this article is limited to determination of competitive effects as adjudicative and legislative facts *within adjudicative proceedings*, which is a setting in which *both* types of determinations may occur.[50] In contrast, the use of economics in self-standing creation of antitrust rules (e.g. by a legislature) is not discussed.[51] The scope further narrows down only to the context of substantive antitrust rules, i.e. rules specifying which conduct is lawful and which is not. While other types of rules such as remedial, jurisdictional and procedural rules also interact with economics,[52] an analysis of these interactions would go beyond the

[49] *See infra* Part I.B.3.

[50] *See infra* notes 114 – 118 and accompanying text.

[51] A use of an economics-based fact in this context nevertheless also amounts to its use as a legislative fact. *See, e.g.*, FED R. EVID. 201(a) advisory committee's note ("Legislative facts . . . are those which have relevance to legal reasoning and the lawmaking process, whether in the formulation of a legal principle or ruling by a judge or court or *in the enactment of a legislative body*." (emphasis added)); Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINNESOTA LAW REVIEW 1, 9 (1988).

[52] As regards remedial rules, see, e.g., Maureen Brunt, *Antitrust in the Courts: The Role of Economics and of Economists*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 1998 357, 358 (Barry E. Hawk ed., 1999) (arguing that economics can be helpful in "formulation and imposition of penalties and remedies"); Lewis Markus, *The Role of Economics in Department of Justice Enforcement of the Antitrust Laws*, 20 AMERICAN BAR ASSOCIATION ANTITRUST SECTION 13, 18-19 (1962) (discussing "the role of economics in fashioning of appropriate relief"); Mark S. Massel, *Economic Analysis in Judicial Antitrust Decisions*, 20 AMERICAN BAR ASSOCIATION ANTITRUST SECTION 46, 52-53 (1962) (arguing that while drafting of an antitrust decree "calls for sophisticated economic analysis, ... [e]conomists have been employed most frequently during the trial of the issue of violation, rather than during the decree proceedings"). As regards jurisdictional rules, see, e.g., Patricia M. Wald, *Judicial Review of Economics Analyses*, 43 YALE JOURNAL ON REGULATION 43, 44 (1983) (observing that a regulatory "agency may use economic analysis simply to find jurisdictional facts"). As regards procedural rules, see, e.g., Andrew I. Gavil, *The Challenges of Economic Proof in a Decentralized and Privatized European Competition Policy System: Lessons from the American Experience*, 4 JOURNAL OF COMPETITION LAW AND ECONOMICS 177, 182 (2008) ("The role of 'economic analysis' is not limited to establishing the substantive standards of conduct. For example, it might also be used to evaluate the arguments for creating indirect purchaser rights or permitting a pass-on defense, the case for criminal sanctions and double or treble damages, the value of leniency programs in promoting cartel detection, and so on. Economic reasoning can link all of the various components of the system.").

Procedural rules may also shape the use of economics in antitrust decision-making. *See* David J. Gerber, *Competition Law and the Institutional Embeddedness of Economics*, *in* ECONOMIC THEORY AND COMPETITION LAW 20, 24 (Josef Drexl, et al.

scope of this study.[53] It should also be mentioned that while this article frequently considers economic analyses submitted to the adjudicating body externally, e.g. by expert witnesses, the reasoning largely applies also to analyses conducted in-house by the employees of the body.[54] To summarize, this article discusses what it means to use economic inquiries into competitive effects in decision-making about the content of substantive antitrust rules and about facts to which these rules apply.

This article proceeds in four parts. Part I develops a conceptual framework to be used by the following parts, introducing the fundamentals of the distinction between adjudicative and legislative facts. Part II discusses the antitrust use of competitive effects as adjudicative facts. It maintains that these are effects of a particular instance of conduct at the bar in so far as they are material under the applicable antitrust rule. Part III analyzes competitive effects as legislative facts. These effects are argued to correspond with effects of an entire class of business conduct (to be) regulated by the given antitrust rule. They are relevant to the proceedings only if the adjudicator does not need to follow a clear pre-existing rule. Part IV concludes.

I. CONCEPTUAL FRAMEWORK

This part outlines the distinction between adjudicative and legislative facts as a distinction between facts used to resolve questions of fact and questions of law, respectively. The aim is to set the stage for the following two parts applying these categories to the use of economics in antitrust decision-making. The part proceeds in two sections. The first one entertains the underlying notions of (a question of) fact and law while the second one presents the distinction between adjudicative and legislative facts as such. Generally speaking, all the mentioned concepts can be explained either without reference to any instrumental or institutional concerns, i.e. analytically, or on account of these concerns, i.e. pragmatically.[55] This article primarily adopts the analytical perspective in

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eds., 2009) ("[T]he methods of economics become tools to be applied according to the rules and procedures of the institutions and organizations that use them."); David J. Gerber, *Convergence in the Treatment of Dominant Firm Conduct: The United States, the European Union, and the Institutional Embeddedness of Economics*, 76 ANTITRUST LAW JOURNAL 951, 953 (2010) ("When institutions apply economics, the scientific and thus abstract methods of economics become *embedded* in the rules and procedures of the institution that uses them, and those rules and procedures shape the way it is used."). In this vein, this article briefly discusses the differences between procedural treatment of adjudicative and legislative facts. *See infra* notes 139 – 146 and accompanying text.

[53] However, the distinction between adjudicative and legislative facts would likely proof useful also for such analyses. *Cf.* MCCORMICK ON EVIDENCE §328 596 (Kenneth S. Broun ed., 7th ed. 2013).

[54] *Cf.* John M. Connor, *Forensic Economics: An Introduction with Special Emphasis on Price Fixing*, 4 JOURNAL OF COMPETITION LAW AND ECONOMICS 31, 42 (2008) (considering "forensic antitrust economists" employed within enforcement agencies).

[55] *Cf.* PETER CANE, ADMINISTRATIVE LAW 59-63 (5th ed. 2011) (discussing analytical and "strategic" accounts of the dichotomy between fact and law); *see also*

view of its main aim being to develop an analytical understanding of the difference between the two antitrust roles of economics under scrutiny. Nevertheless, as the pragmatic approach is widespread in practice, it is also paid certain attention.

A. Fact and Law

As suggested by their definition repeatedly mentioned above, the essence of adjudicative and legislative facts and the distinction between them hinges entirely upon the fact/law dichotomy: they are *facts* used to resolve questions of *fact*, respectively of *law*. The present section surveys this dichotomy – the existence of which is well established in legal thought in general[56] as well as antitrust thought in particular[57] – formulating above all its two analytical accounts,[58] each of which carries relevance to a different element of the definition of adjudicative and legislative facts. The first one regards fact and law as such, focusing on their intrinsic character. The second one concerns the difference between *questions* of fact and law, paying heed to the function of the respective

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infra Part I.A.3 and notes 147 – 156 and accompanying text.

[56] *See* Gary Lawson, *Proving the Law*, 86 NORTHWESTERN UNIVERSITY LAW REVIEW 859, 860 (1992) ("It is conventional to distinguish between propositions of law and propositions of fact."); *id.* at 862 ("The distinction between questions of law and questions of fact is deeply ingrained in American jurisprudence . . . .").

[57] *See, e.g.*, Andrew I. Gavil, *Competition Policy, Economics and Economists: Are We Expecting Too Much?*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 2005 575, 576-77 (Barry E. Hawk ed., 2006); Rebecca Haw Allensworth, *Law and the Art of Modeling: Are Models Facts?*, 103 GEORGETOWN LAW JOURNAL 825, passim (2015).

[58] Please note that there are voices arguing that any analytical account of the dichotomy is misguided. *See, e.g.*, Ronald J. Allen & Michael S. Pardo, *The Myth of the Law-Fact Distinction*, 97 NORTHWESTERN UNIVERSITY LAW REVIEW 1769, 1770 (2003) ("[T]he quest to find 'the' essential difference between the two that can control subsequent classifications of questions as legal or factual is doomed from the start, as there is no essential difference. There are only pragmatic differences . . . ."); John O. McGinnis & Charles W. Mulaney, *Judging Facts Like Law*, 25 CONSTITUTIONAL COMMENTARY 69, 71 (2008) ("There is no analytic dichotomy between law and fact."). The present article nevertheless illustrates its value.

This article nevertheless espouses the stream of scholarship considering the analytical approach sound. *See, e.g.*, Richard D. Friedman, *Standards of Persuasion and the Distinction Between Fact and Law*, 86 NORTHWESTERN UNIVERSITY LAW REVIEW 916, 925 (1992) ("[T]here is a clear analytical distinction between law and fact . . . ."); HENRY M. HART & ALBERT M. SACKS, THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW 349 (William N. Eskridge, Jr. & Philip P. Frickey eds., 1994) ("Some critics have concluded that 'law' cannot be distinguished analytically from 'fact' and that at best these terms are nothing more than labels to describe a conclusion about division of function. . . . The key issue posed by such critics is whether the distinction between 'law' and 'fact' really is a matter of division of function, and nothing more. The editors believe that a proper analysis of 'law and fact' will yield distinctions having significance for other important purposes, and that the effort to draw these distinctions cannot be abandoned without obscuring problems that need to be clarified."); FREDERICK SCHAUER, THINKING LIKE A LAWYER: A NEW INTRODUCTION TO LEGAL REASONING 205 (2009).

item in the process of resolving legal disputes. In addition, this section also reviews the pragmatic approach to the dichotomy.

1. An Intrinsic Difference Between Fact and Law

Let us first consider an analytical account of the fact/law dichotomy based on intrinsic characteristics of fact and law. This account corresponds to Schauer's observation that this dichotomy is "a variation on the venerable distinctions between . . . is and ought, and description and prescription."[59] That is to say that assertions of law concern prescriptions about what ought (not[60]) to be[61] or – viewed from another angle – specifications of what is lawful and what is not.[62] Assertions of fact, in contrast, describe what is[63] (was, will be[64]), with regard to states of affairs, processes, or events in the extra-legal reality around us.[65]

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[59] FREDERICK SCHAUER, THINKING LIKE A LAWYER: A NEW INTRODUCTION TO LEGAL REASONING 205 (2009).

[60] *See* Jaap Hage, *Facts, Values and Norms*, *in* FACTS AND NORMS IN LAW: INTERDISCIPLINARY REFLECTIONS ON LEGAL METHOD, 36 (Sanne Taekema, et al. eds., 2016) ("There is one basic deontic modality and two derived ones. The basic modality is that somebody ought to do something. One derived deontic modality is that somebody is forbidden to do something. This means that this person ought to refrain from doing something. The other derived deontic modality is that somebody is permitted to do something. This means that this person is not forbidden to do it.").

[61] *See, e.g.*, John Monahan & Laurens Walker, *Social Authority: Obtaining, Evaluating, and Establishing Social Science in Law*, 134 UNIVERSITY OF PENNSYLVANIA LAW REVIEW 477, 489 (1986) ("Law . . . is *normative*. It does not describe how people *do* behave, but rather prescribes how they *should* behave."); Adrian A. S. Zuckermann, *Law, Fact or Justice?*, 66 BOSTON UNIVERSITY LAW REVIEW 487, 487 (1986) ("In legal reasoning we proceed according to normative rules laid down by the lawmaker or by morality, and we aim to determine what these rules require the citizen or court to do. By contrast, in factual reasoning, it is supposed, we are not concerned with what the rules of law or morality require but with what facts exist.").

[62] *See, e.g.*, Kai Hüschelrath & Sebastian Peyer, *Public and Private Enforcement of Competition Law: A Differentiated Approach*, 36 WORLD COMPETITION 585, 597 (2013) ("On a very abstract level, a certain antitrust rule divides cases into two categories: those that are 'legal under the respective rule' and those that are 'illegal under the respective rule'."), *cf.* MARK BLAUG, THE METHODOLOGY OF ECONOMICS : OR, HOW ECONOMISTS EXPLAIN 113 (1992) ("An ought-statement expresses an evaluation of the state of the world – it approves or disapproves, it praises or condemns, it extols or deplores . . . .").

[63] *See, e.g.*, John Monahan & Laurens Walker, *Social Authority: Obtaining, Evaluating, and Establishing Social Science in Law*, 134 UNIVERSITY OF PENNSYLVANIA LAW REVIEW 477, 489 (1986) (observing that facts are positive because they "concern the way the world *is*, with no necessary implications for the way the world *ought* to be").

[64] *Infra* notes 167 – 169 and accompanying text.

[65] *See* H. L. HO, A PHILOSOPHY OF EVIDENCE LAW: JUSTICE IN THE SEARCH FOR TRUTH (2008) (working with the mentioned categories of facts (citing GEORG HENRIK VON WRIGHT, NORM AND ACTION: A LOGICAL INQUIRY 25-26 (1963))); *see also* PETER CANE, ADMINISTRATIVE LAW 59 (5th ed. 2011) ("In practical terms, the distinction between law and fact is reasonably straightforward: a question of fact is a question about the existence of some phenomenon in the world around us; a legal question is a question about rules and norms found in primary and secondary legislation and in decisions of courts and tribunals.").

Admittedly, it is sometimes argued that this account of the dichotomy is false and that laws are actually a species of facts. Consider for instance Lawson's observation: "From an epistemological perspective, every positive propositional claim about the law in the form 'the law is X' is a factual claim of one sort or another."[66] Consequently, following this logic, Allen and Pardo conclude that one can at best distinguish between "non-legal" and "legal" facts, not between fact and law.[67] Such a conclusion is nevertheless mistaken because, as Hage explains, while the existence of a legal rule is indeed a fact, that "has nothing to do with the distinction between Is and Ought."[68] In other words, the *existence* of facts and laws should not be mixed up with their *positivity* and *normativity*.

The notion of a fact is central to our inquiry into the roles of positive economics within antitrust proceedings because this branch of economics is all about facts. As written by Milton Friedman in his extraordinarily influential essay on economic methodology, positive economics "deals with 'what is,' not with 'what ought to be.' "[69] There is a myriad of types of facts studied by economics bearing relevance to antitrust decision-making. They include for instance the market share, market power, elasticity of demand, barriers to entry, and marginal costs.[70] As mentioned, the present article focuses on competitive effects as arguably the most salient type of antitrust-relevant facts.[71]

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[66] Gary Lawson, *Proving the Law*, 86 NORTHWESTERN UNIVERSITY LAW REVIEW 859, 863 (1992); *see also* Ronald J. Allen & Michael S. Pardo, *The Myth of the Law-Fact Distinction*, 97 NORTHWESTERN UNIVERSITY LAW REVIEW 1769, 1792-93 (2003).

[67] Ronald J. Allen & Michael S. Pardo, *The Myth of the Law-Fact Distinction*, 97 NORTHWESTERN UNIVERSITY LAW REVIEW 1769, 1801-02 (2003).

[68] Jaap Hage, *Facts, Values and Norms*, *in* FACTS AND NORMS IN LAW: INTERDISCIPLINARY REFLECTIONS ON LEGAL METHOD, 39-40 (Sanne Taekema, et al. eds., 2016).

[69] MILTON FRIEDMAN, The Methodology of Positive Economics, *in* ESSAYS IN POSITIVE ECONOMICS 3, 4 (1953); *see also* Theodore A. Groenke, *Use of Expert Economic Assistance in Defense of Antitrust Cases*, 20 AMERICAN BAR ASSOCIATION ANTITRUST SECTION 92, 98 (1962) ("Economics, after all, is not a philosophy concerning the most appropriate form of economic order, but a study of 'what is.' Like the physicist, who attempts to determine how and why things are as they are in the physical universe, the economist seeks to determine how and why things are in the economic universe."); HERBERT HOVENKAMP, ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION 49 (2005) ("Regarded in a scientific sense, the question whether an above-cost price can be anticompetitive is one of economic theory, or fact. One determines its truthfulness not by reading a statute, but by constructing an economic model and then attempting to test it. This is precisely the stuff of empirical science, so the statement 'prices above cost can injure competition' is just as much a matter of fact as the statement 'the atmosphere limits the acceleration of free-falling bodies.' Either statement might be always true, always false, or true only part of the time. But the point is that both are statements about how the world works.").

[70] *See* FEDERAL JUDICIAL CENTER, MANUAL FOR COMPLEX LITIGATION, FOURTH §30.2 523 (2004) (identifying these as antitrust issues on which expert testimony can be proffered).

[71] *See supra* note 41 and accompanying text; c*f.* Richard M. Mosk, *The Role of Facts in International Dispute Resolution*, 304 COLLECTED COURSES OF THE HAGUE

Facts determined with the help of economics tend not to be apparent facts.[72] Even though the process of their determination is usually based on some more or less directly observable facts, these are supplemented with a plethora of assumptions in order to derive other – inferred – facts. As a result, as Decker puts it, "economic facts do have a distinct nature; they are in many cases the result of intellectual construction rather than empirical observation."[73] A similar point is made also by Maggiolino: "[E]conomics . . . does not supply pure descriptions of how business facts really come about; it relies also on axioms and value-assumptions."[74] Still, however, as long as the economic inferences concern "what is," rather than "what ought to be," they are factual.

This raises a separate question whether an assertion of fact is true or false. To be sure, even an erroneous information about "what is" may be used as a fact:[75] "Facts are what we determine them to be, and that may not correspond with the truth."[76] It is nevertheless of course preferable that legal decision-making rely on an accurate account of the facts. Actually, the reason why ascertainment of competitive effects for the purposes of antitrust proceedings is carried out with the help of economics

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ACADEMY OF INTERNATIONAL LAW 9, 37-38 (2003) (treating other types of effects as law-relevant facts). The sub-field of economics studying competitive effects is Industrial Organization. *See e.g.* Oliver Budzinski, *Modern Industrial Economics: Open Problems and Possible Limits*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 111, 129 (Josef Drexl, et al. eds., 2011).

[72] *Cf.*, E. Barrett Prettyman, *Proof of Economic and Scientific Facts*, 20 A.B.A. ANTITRUST SECTION 64, 67 (1962) (arguing that economic facts "are not facts at all but are theories").

[73] CHRISTOPHER DECKER, ECONOMICS AND THE ENFORCEMENT OF EUROPEAN COMPETITION LAW 189 (2009).

[74] Mariateresa Maggiolino, *Plausibility, Facts and Economics in Antitrust Law*, 7 YEARBOOK OF ANTITRUST AND REGULATORY STUDIES 107, 126 (2014) (emphasis omitted) (footnote omitted); *see also* John E. Lopatka & William H. Page, *Economic Authority and the Limits of Expertise in Antitrust Cases*, 90 CORNELL LAW REVIEW 617, 621 (2005) ("[E]conomic knowledge rests, in large part, on a foundation of shared beliefs and values.").

[75] *Cf.* ROBERT E. HALL & MARC LIEBERMAN, MICROECONOMICS: PRINCIPLES AND APPLICATIONS 5 (4th ed. 2008) (arguing that a statement about how economy works counts as a positive economic statement even if it is false).

[76] Richard M. Mosk, *The Role of Facts in International Dispute Resolution*, 304 COLLECTED COURSES OF THE HAGUE ACADEMY OF INTERNATIONAL LAW 9, 32 (2003); *see also* Mirjan Damaška, *Truth in Adjudication*, 49 HASTINGS LAW JOURNAL 289, 295 (1998) ("[W]hat is 'really' true need not square with what has been decided to be true; factual findings need not match reality . . . ."); Louis L. Jaffe, *Judicial Review: Question of Law*, 69 HARVARD LAW REVIEW 239, 242 (1955) ("A finding of fact does not require – because it cannot require – that the phenomenon so found have been or be an absolute reality. The finding is neither more nor less than an inference based on evidence."); ALEX STEIN, FOUNDATIONS OF EVIDENCE LAW 10 (2005) ("In adjudication, any factual determination that adjudicators make – erroneous and accurate alike – counts as a 'fact' for the purposes of their decision."); Elizabeth G. Thornburg, *The Curious Appellate Judge: Ethical Limits on Independent Research*, 28 THE REVIEW OF LITIGATION 131, 140 n.30 (2008) (explaining that facticity does not imply correctness).

is to ensure this accuracy.[77] The present article addresses only those aspects of accuracy that concern differences between the two roles of economics in question.

As regards adjudicative facts and legislative facts, they are both facts in the sense discussed in this section. That is to say that they both concern "what is," not "what ought to be."[78] What distinguishes them from other facts is their use in legal decision-making; a fact becomes adjudicative or legislative only once it is – explicitly or implicitly – used to resolve a question of fact, respectively of law,[79] concepts to which we shall turn now.

2. A Functional Difference Between Questions of Fact and Law

Let us now occupy ourselves with the difference between *questions* of fact and law. As explained by Hart and Sacks, "[t]he problems of law and fact with which lawyers are concerned arise in the context of the process of applying general directive arrangements to particular situations."[80] This process – also known as *adjudication* – may be performed not only by courts but also by administrative agencies,[81] which is common for instance as regards EU antitrust agencies. We shall focus here only on the "minimal form of adjudication," which according to Hart consists in "mak[ing] authoritative determinations of the question

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[77] Luke M. Froeb, et al., *The Economics of Organizing Economists*, 76 ANTITRUST LAW JOURNAL 569, 572-73 (2009) ("Economic methodology is particularly well suited for predicting the causal effects of business practices and for determining the effects of counterfactual scenarios that are used to determine liability and damages." (footnotes omitted)); David J. Gerber, *The Future of Article 82: Dissecting the Conflict*, *in* EUROPEAN COMPETITION LAW ANNUAL 2007: A REFORMED APPROACH TO ARTICLE 82 37, 48 (Claus-Dieter Ehlermann & Mel Marquis eds., 2008) ("Competition law norms refer to the effects of particular conduct, and economic science can be used to assess such effects more precisely, more effectively and with greater methodological stability than is otherwise possible."); *cf.* Harold L. Korn, *Law, Fact, and Science in the Court*, 66 COLUMBIA LAW REVIEW 1080, 1110 (1966) ("In determining whether the conditions specified by the rule of law exist, scientific knowledge is often used because it enhances the trier's ability to arrive at the correct result.").

[78] *See* Michael J. Saks, *Judicial Attention to the Way the World Works*, 75 IOWA LAW REVIEW 1011, 1019 (1990) ("Kenneth Culp Davis terms both 'facts' because both have something to do with positive rather than normative knowledge.").

[79] *See* Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINNESOTA LAW REVIEW 1, 10 (1988) (arguing this point with respect to legislative facts).

[80] HENRY M. HART & ALBERT M. SACKS, THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW 350 (William N. Eskridge, Jr. & Philip P. Frickey eds., 1994); *see also* Adrian A. S. Zuckermann, *Law, Fact or Justice?*, 66 BOSTON UNIVERSITY LAW REVIEW 487, 487 (1986) ("The distinction between law and fact is said to lie at the basis of adjudication . . . .").

[81] *Cf.* II KENNETH CULP DAVIS & RICHARD J. PIERCE, JR., ADMINISTRATIVE LAW TREATISE 117 (3d ed. 1994) ("Courts adjudicate only a small fraction of disputes, however. Agencies adjudicate the vast majority of the disputes that arise in the U.S. legal system.").

whether, on a particular occasion, a [substantive] rule has been broken,"[82] setting thus aside selection of remedies.[83] In antitrust law, hence, adjudication entails determination whether the particular business conduct at bar is unlawful under the applicable antitrust rule.[84]

Adjudication proceeds in three steps,[85] entailing the so-called syllogistic reasoning.[86] First, the relevant characteristics of the particular matter at hand need to be determined[87] as the minor premise of the syllogism.[88] This is a resolution of a (pure) question of fact.[89] Second, the

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[82] H. L. A. HART, THE CONCEPT OF LAW 96-97 (Penelope A. Bulloch & Joseph Raz eds., 2d ed. 1994).

[83] Note that the distinction between adjudicative and legislative facts nevertheless bears relevance also to this area of legal decision-making. *See supra* note 53.

[84] Although antitrust practice and scholarship often call assessment of lawfulness "enforcement," strictly speaking, this term designates a broader phenomenon that, on top of the minimal form of adjudication, includes also other tasks such as detection of suspicious conduct or sentencing. *See* William E. Kovacic & David A. Hyman, *Competition Agency Design: What's on the Menu?*, 8 EUROPEAN COMPETITION JOURNAL 527, 535 (2012) ("The enforcement of a competition law entails several discrete tasks: the investigation of possible wrongdoing, the decision to prosecute, the determination of culpability and the imposition of sanctions. In the design of a competition system, a jurisdiction can unbundle these functions, or combine them within a single entity."); Giorgio Monti, *EC Competition Law: The Dominance of Economic Analysis?*, *in* THE DEVELOPMENT OF COMPETITION LAW: GLOBAL PERSPECTIVES 3, 4 (Roger Zäch, et al. eds., 2010) (distinguishing between "the application of rules to a given scenario, and their enforcement").

[85] HENRY M. HART & ALBERT M. SACKS, THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW 350-51 (William N. Eskridge, Jr. & Philip P. Frickey eds., 1994). Hart and Sacks nevertheless warn that the decisional process should not be seen as consisting of successive steps: "[T]he law determines what facts are relevant while at the same time the facts determine what law is relevant." *Id.* at 351.

[86] *Cf.* Nathan Isaacs, *The Law and the Facts*, 22 COLUMBIA LAW REVIEW 1, 2 (1922) ("I refer to the legal reasoning in which propositions of law are contrasted with propositions of fact very much as major premises are contrasted with minor premises, and in which conclusions are drawn by the very same process."); D. NEIL MACCORMICK, RHETORIC AND THE RULE OF LAW: A THEORY OF LEGAL REASONING 32 (2005) (arguing that syllogistic reasoning is "central to legal reasoning"); Iwakazu Takahashi, *On the Difference of Methodology in Jurisprudence and Economics – Comment on Künzler*, *in* THE GOALS OF COMPETITION LAW 214, 215 (Daniel Zimmer ed., 2012) ("In competition law, provisions are applied according to the legal syllogism: (1) major premise: provisions of acts (the requirement and legal effect), (2) minor premise: facts, and (3) application and legal effect: the application of provisions to facts (= court decision).").

[87] Hart and Sacks call this step fact identification, HENRY M. HART & ALBERT M. SACKS, THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW 350 (William N. Eskridge, Jr. & Philip P. Frickey eds., 1994), and Friedman fact-finding, Richard D. Friedman, *Standards of Persuasion and the Distinction Between Fact and Law*, 86 NORTHWESTERN UNIVERSITY LAW REVIEW 916, 918 (1992).

[88] *See* Christopher Enright, *Distinguishing Law and Fact*, *in* SUNRISE OR SUNSET? ADMINISTRATIVE LAW IN THE NEW MILLENNIUM 301, 307 (Chris Finn ed., 2000) (observing that the minor premise concerns the facts to which the applicable legal rule applies).

[89] *Cf.* Forrest G. Alogna, *Double Jeopardy, Acquittal Appeals, and the Law-Fact*

applicable legal rule needs to be determined[90] to serve as the major premise of the syllogism.[91] This determination amounts to a resolution of a (pure) question of law.[92] Third, the particular is linked up with the general in order to reach the conclusion of the syllogism as to whether there is an infringement of law or not. This is known as resolution of a "mixed question of law and fact"[93] or as law-application (in a narrow sense).[94]

a. Questions of Fact and Questions of Law

Adjudication thus entails resolution of questions of fact as well as question of law. As regards the latter, a mechanistic view of adjudication assumes that there are unambiguous pre-existing legal rules which the adjudicator easily ascertains. In reality, however, the applicable rule often bears several possible meanings and the adjudicator needs to select one of them or she may even be authorized to disregard the pre-existing rule altogether. Furthermore, such non-mechanical resolutions of questions of law may govern also future cases, which will be taken into account by the adjudicator when making them (adjudicative law-making).

Resolution of questions of fact as well as questions of law may rely on information about "what is," i.e. facts as they were discussed above, including economics-based facts.[95] A fact used to resolve a question of fact is then adjudicative and a fact used to resolve a question of law is legislative. Especially the latter may appear confusing at first blush, for

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Distinction, 86 CORNELL LAW REVIEW 1131, 1154 (2001).

[90] Hart and Sacks call this step law declaration, HENRY M. HART & ALBERT M. SACKS, THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW 350 (William N. Eskridge, Jr. & Philip P. Frickey eds., 1994), and Friedman law-determination, Richard D. Friedman, *Standards of Persuasion and the Distinction Between Fact and Law*, 86 NORTHWESTERN UNIVERSITY LAW REVIEW 916, 918 (1992).

[91] *See* Christopher Enright, *Distinguishing Law and Fact*, *in* SUNRISE OR SUNSET? ADMINISTRATIVE LAW IN THE NEW MILLENNIUM 301, 307 (Chris Finn ed., 2000) (observing that the major premise concerns the applicable legal rule).

[92] *Cf.* Forrest G. Alogna, *Double Jeopardy, Acquittal Appeals, and the Law-Fact Distinction*, 86 CORNELL LAW REVIEW 1131, 1154 (2001).

[93] *See, e.g.*, Pullman-Standard v. Swint, 456 U.S. 273, 289 n.19 (1982) ("[M]ixed questions of law and fact – *i.e.*, questions in which the historical facts are admitted or established, the rule of law is undisputed, and the issue is whether the facts satisfy the statutory standard, or to put it another way, whether the rule of law as applied to the established facts is or is not violated."); Ronald J. Allen & Michael S. Pardo, *The Myth of the Law-Fact Distinction*, 97 NORTHWESTERN UNIVERSITY LAW REVIEW 1769, 1779 (2003) ("[C]ourts are faced with so-called 'mixed' issues, which involve the application of the rules or standards to the underlying events."); *infra* Part Part I.A.2.b.

[94] *See, e.g.*, HENRY M. HART & ALBERT M. SACKS, THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW 351 (William N. Eskridge, Jr. & Philip P. Frickey eds., 1994).

[95] *Cf.* Mariateresa Maggiolino, *Plausibility, Facts and Economics in Antitrust Law*, 7 YEARBOOK OF ANTITRUST AND REGULATORY STUDIES 107, 126 (2014) ("However, economics may play a further role within antitrust law – a role that has nothing to do with policy or interpretation but regards facts.").

facts in this situation "take on *legal* dimensions."[96] Nevertheless, resolution of questions of law – i.e. interpretation or creation of applicable legal rules – does frequently need to take into account factual information.

In jury trials, questions of fact are theoretically supposed to be resolved by juries and questions of law by judges. That is why adjudicative facts are often said to be "the facts that normally go to a jury in a jury case."[97] This does not mean however that only those facts that actually end up going to a jury qualify as adjudicative. Instead, the message is that adjudicative facts correspond with the *kind* of facts that the legal system allocates to a jury (if there is one in the given case); facts of this kind then count as adjudicative also in nonjury court trials as well as in administrative proceedings. Note that facts going to juries would coincide with facts used to resolve questions of fact as long as juries – where they exist – were to determine minor premises of all legal syllogisms.[98] In reality, however, even in jury trials, many of these premises are determined by judges.[99]

It is also worth noting that the difference between the intrinsic and functional understanding of the fact/law dichotomy presented in this section is not conventionally recognized. As a consequence, the terminology is not settled – fact and law are not necessarily understood as intrinsic concepts and questions of fact and law as functional concepts, the two pairs of terms thus being used indiscriminately.[100] This article, nevertheless, uses them as defined above.

b. Mixed Questions of Fact and Law

The subsequent parts of this article do not concern the resolution of mixed questions of fact and law. This step of the adjudicative process is irrelevant to the current purposes because economics plays no role in it. It is one thing to determine what competitive effects were or will be

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[96] Bryan L. Adamson, *Federal Rule of Civil Procedure 52(a) as an Ideological Weapon*, 34 FLORIDA STATE UNIVERSITY LAW REVIEW 1025, 1031 (2007) (emphasis added).

[97] 2 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §15.03 353 (1958).

[98] *See, e.g.*, Stephen A. Weiner, *The Civil Nonjury Trial and the Law-Fact Distinction*, 55 CALIFORNIA LAW REVIEW 1020, 1020 (1967) ("A question of identifying broadly formulated principles for judging the parties' conduct can meaningfully be defined as a question of law for the trial court. A question of reconstructing acts or events which have actually taken place, or conditions which have actually existed, can meaningfully be defined as a question of fact for the jury." (footnote omitted)).

[99] FREDERICK SCHAUER, THINKING LIKE A LAWYER: A NEW INTRODUCTION TO LEGAL REASONING 205 (2009); 1 CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, FEDERAL EVIDENCE §60 303 (2d ed. 1994) ("In judge-tried and jury-tried cases alike, judges often resolve factual issues . . . ."). Such issues nevertheless tend to be (pragmatically) labeled as issues of law in accordance with the traditional wisdom that "facts are for juries and the law is for judges." FREDERICK SCHAUER, THINKING LIKE A LAWYER: A NEW INTRODUCTION TO LEGAL REASONING 205 (2009); *see also infra* Part I.A.3.

[100] *See, e.g.*, *supra* note 65.

produced by the instance of business conduct at bar (question of fact), and another to conclude whether these effects satisfy the applicable rule (mixed question of fact and law). This point is raised for instance by Bornkamm in the context of merger assessment. He argues that the question whether a merger would intimidate competitors and discourage them from entering the market or competing fiercely is distinct from the question whether such an intimidation and discouragement is sufficient to satisfy a legal prohibition on strengthening of a dominant position.[101] Economics provides no special expertise with respect to answering questions of the latter type.

For the sake of completeness, it should nevertheless be mentioned that the third step of syllogistic reasoning is frequently seen problematic as regards the distinction between fact and law. Actually, its complicated classifiability is largely the reason why lawyers are skeptical about the very possibility of analytically distinguishing the two at all.[102] Monaghan suggests that the problem arises from using these two categories to classify three distinct decisional steps.[103] Nevertheless, this would likely cause little trouble if the minor and major premise were articulated in so much detail that the step linking them together was almost mechanical.[104] It is thus rather our frequent inability to achieve such articulation that appears to create the problem:[105] Instead of being an instance of pure logical deduction, the third step then implicitly involves some extent of resolving a question of fact or law.[106] Still, it is possibly misleading to

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[101] Bornkamm advanced this argument during a panel discussion. *See* William T. Lifland, et al., *Administrative Antitrust Authorities: Adjudicative and Investigatory Functions*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 2003 411, 427 (Barry E. Hawk ed., 2004).

[102] *Cf.* PETER CANE, ADMINISTRATIVE LAW 60-61 (5th ed. 2011).

[103] Henry P. Monaghan, *Constitutional Fact Review*, 85 COLUMBIA LAW REVIEW 229, 234 (1985) ("[T]he two categories have been used to describe at least *three* distinct functions: law declaration, fact identification, and law application."); *see also* Stephen A. Weiner, *The Civil Nonjury Trial and the Law-Fact Distinction*, 55 CALIFORNIA LAW REVIEW 1020, 1022 (1967) (arguing that relating the governing legal standard to particular facts of the case "cannot be meaningfully described as either" a question of law or fact).

[104] Consider for instance the application of a rule prohibiting speeds over 70 mph on a freeway to a particular case of going 100 mph.

[105] *Cf.* Richard D. Friedman, *Standards of Persuasion and the Distinction Between Fact and Law*, 86 NORTHWESTERN UNIVERSITY LAW REVIEW 916, 921-22 (1992) ("Fact finders cannot perfectly articulate the facts that they find. Indeed, juries are not ordinarily expected to be articulate at all. A trial court sitting without a jury is expected to articulate its factual findings, but it may use conclusory statements to jump the gap between its articulations of factual reality and of legal standard. On the legal side, courts articulate generalized norms, and may attempt to articulate more particular applications. But with respect to most, and perhaps all, legal questions, there comes a point in the articulation of the standard where the courts are unwilling and perhaps unable to be more precise. When it reaches this point, a court might still impose a standard, albeit an unarticulated one." (footnote omitted)).

[106] *Cf.* Jack Beatson, *The Scope of Judicial Review for Error of Law*, 4 OXFORD

speak about these issues, as some commentators do, as being located on a continuum between fact-determination and law-determination.[107] We should rather understand a given determination made by the adjudicator as displaying attributes of both.[108] Again, however, the remainder of this article may conveniently disregard this concern as it is irrelevant to the issue at hand.

3. A Pragmatic Dichotomy

The dichotomy between (questions of) fact and law can also be approached pragmatically.[109] This approach is motivated by the procedural implications of classifying a given issue as factual or legal. This classification namely governs, for instance, "whether a judge or jury will decide the issue; if, and under what standard, there will be appellate review; whether the issue is subject to evidence and discovery rules;

JOURNAL OF LEGAL STUDIES 22, 39 (1984) ("Analytically, it should be possible to make a further division between (i) the inquiry into the meaning of the words of the statute – law formulation – and (ii) the application of that meaning to the facts of a particular case – law application. However, this division is in fact often impossible to make without undue artificiality."); Richard D. Friedman, *Standards of Persuasion and the Distinction Between Fact and Law*, 86 NORTHWESTERN UNIVERSITY LAW REVIEW 916, 922 (1992) ("[B]y using such open-textured words as 'reasonable,' a court leaves to the jury the determination of the applicable standard in the particular case. . . . The jury in such a case does more than determine an aspect of reality. It also determines the norms that will be applied in that case."); Henry P. Monaghan, *Constitutional Fact Review*, 85 COLUMBIA LAW REVIEW 229, 236 (1985) ("[L]aw application frequently entails some attempt to elaborate the governing norm.").

[107] *See, e.g.*, Bryan L. Adamson, *Federal Rule of Civil Procedure 52(a) as an Ideological Weapon*, 34 FLORIDA STATE UNIVERSITY LAW REVIEW 1025, 1048 (2007) ("What can best be said is that the law/fact distinction is only one of degree, with 'pure' law at one end of the continuum and 'pure' fact at the other end." (footnote omitted)).

[108] *Cf.* ASCAP v. Showtime/The Movie Channel, Inc., 912 F.2d 563, 569 n.11 (2d Cir. 1990) ("We prefer to consider issues either as matters of fact or of law, avoiding the unhelpful category of 'mixed question of law and fact.' That phrase usually conceals the existence of both a question of fact and a question of law and does not aid in identifying the appropriate standard of appellate review."); Richard D. Friedman, *Standards of Persuasion and the Distinction Between Fact and Law*, 86 NORTHWESTERN UNIVERSITY LAW REVIEW 916, 922 (1992) ("Nor should we be satisfied by referring to 'mixed questions of fact and law.' That term may often be accurate enough, but it is potentially a cop out, because it can obscure the complexity of what occurs. Both the court and the jury may have to consider legal standards and facts simultaneously. But that does not mean that the function performed by either lies on a continuum between fact-finding and law-determination. Rather, there may be aspects of both fact-finding and law-determination in the functions of both the court and the jury.").

[109] *See, e.g.*, 2 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §30.02 192 (1958) ("The courts use two basic approaches to the distinction between questions of law and questions of facts. One approach is the analytical, literal, or conceptual, which emphasizes the layman's meaning of the terms 'law' and 'fact.' We shall call this the analytical approach. The other approach is the practical, functional, pragmatic, or policy approach, which tries to avoid allocation of functions merely on the basis of the literal meaning of term 'law' and 'fact' but which attaches these labels only on the basis of weighing the practical reasons for and against each possible allocation.").

whether procedural devices such as burdens of proof apply; and whether the decision has precedential value."[110] The practical approach then dictates that a given issue be classified according to the procedural treatment that seems most appropriate. This outcome-driven approach is often followed in the decision-making reality,[111] which is why the classifications made by adjudicators often "do not conform to the theoretical distinction between law and fact."[112] This is why it is useful to be aware of this approach even though it is not directly relevant to the below presented analysis of the contributions made by economics to antitrust decision-making.

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[110] Ronald J. Allen & Michael S. Pardo, *The Myth of the Law-Fact Distinction*, 97 NORTHWESTERN UNIVERSITY LAW REVIEW 1769, 1769 (2003).

[111] Miller v. Fenton, 474 U.S. 104, 114 (1985) ("[T]he fact/law distinction at times has turned on a determination that, as a matter of the sound administration of justice, one judicial actor is better positioned than another to decide the issue in question."); 2 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §30.01 190 (1958) ("[T]he [Supreme] Court has often used a practical or policy approach to the law-fact distinction and has often rejected the literal or analytical approach.").

[112] Adrian A. S. Zuckermann, *Law, Fact or Justice?*, 66 BOSTON UNIVERSITY LAW REVIEW 487, 488 (1986). *See also* Jeffrey C. Alexander, *Law/Fact Distinction and Unsettled State Law in the Federal Courts*, 64 TEXAS LAW REVIEW 157, 176-77 (1985) ("[A]ny attempt to define the terms 'law' and 'fact' is futile if it is divorced from the policies for which the distinction is being made."); Ronald J. Allen & Michael S. Pardo, *The Myth of the Law-Fact Distinction*, 97 NORTHWESTERN UNIVERSITY LAW REVIEW 1769, 1770, 82 (2003) (arguing that the label 'law' or 'fact' is applied to an issue only after a pragmatic allocative decision is made); Ray A. Brown, *Fact and Law in Judicial Review*, 56 HARVARD LAW REVIEW 899, 900 (1943) ("[W]e rather suspect that this seemingly rigid dichotomy of law and fact is only a bit of legalistic mummery designed to conceal from the uninitiated the fact that the courts decide these questions about as they wish."); Rebecca Haw Allensworth, *Law and the Art of Modeling: Are Models Facts?*, 103 GEORGETOWN LAW JOURNAL 825, 846-47 (2015) ("The modern view, endorsed by courts and critics alike, is that the label of 'fact' or 'law' (or something in between) attaches because of pragmatic judgements about how an issue is best resolved by the legal system."); HERBERT HOVENKAMP, ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION 48 (2005) ("[T]he line between fact and law actually is indistinct, and the difference between them is a matter of policy rather than science. In part, this policy is driven by concerns over institutional limitations on our ability to manage certain types of facts."); Henry P. Monaghan, *Constitutional Fact Review*, 85 COLUMBIA LAW REVIEW 229, 234 (1985) ("To be sure, the categories of law and fact have traditionally served an important regulatory function in distributing authority among various decisionmakers in the legal system. But there is no imperative that a properly affixed characterization necessarily controls allocation of functions. And, quite plainly, the actual distribution of authority between judges and other decisionmakers has often been governed by other factors, such as the nature of the substantive issue and the character of the decisionmakers." (footnotes omitted)); Elizabeth G. Thornburg, *The Curious Appellate Judge: Ethical Limits on Independent Research*, 28 THE REVIEW OF LITIGATION 131, 179 (2008) ("The courts, while talking about fact and law, are actually assigning decisions they consider to be more important to the judge rather than to the jury.").

B. Adjudicative and Legislative Facts

After reviewing the differences between fact and law and between questions of fact and questions of law, let us now concentrate on the two types of facts at stake in this article: adjudicative facts and legislative facts. This section provides an introduction to the very meaning of the distinction, its history, and also its practical procedural significance. Each of the concerned types of fact is discussed in greater detail by the following two parts of the article.

1. Distinction Fundamentals

Before proceeding to separate analyses of using competitive effects as adjudicative facts (Part II) and legislative facts (Part III), let us underline some features and ramifications of the distinction between these two categories. It should be already clear that the difference between them is not intrinsic but rather depends on for what purpose the fact is used.[113] Further, one should not think that an adjudicative fact carries relevance for adjudication and a legislative fact does not; they both do.[114] Put the other way around, not every fact used in adjudication is necessarily adjudicative.[115] What matters for the classification of a given fact is

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[113] Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINNESOTA LAW REVIEW 1, 16 (1988) ("The nature of the fact in dispute does not determine whether it is an adjudicative or a premise fact."); *id.* at 19 n.50 ("We should bear in mind that it is the purpose for which the fact determination is to be used, not the inherent nature of the fact itself, that distinguishes between premise facts and adjudicative facts."); *id.* at 21 ("The essence of the distinction between premise facts and adjudicative facts is the purpose for which they are used in deciding a case."); *id.* at 70 ("The inherent nature of the fact in dispute does not determine whether it is an adjudicative or a premise fact; rather, the distinction is based on the purpose for which the court uses the fact determination."); Elizabeth G. Thornburg, *The Curious Appellate Judge: Ethical Limits on Independent Research*, 28 THE REVIEW OF LITIGATION 131, 154 (2008) ("[I]t is not the information itself but the way in which it is used that distinguishes the two."); 21B CHARLES ALAN WRIGHT & KENNETH W. GRAHAM, JR., FEDERAL PRACTICE AND PROCEDURE: FEDERAL RULES OF EVIDENCE: RULES 201 TO 400 §5103.2 120 (2d ed. 2005) (" '[L]egislative facts' take on that quality by the use to which they are put in the case, not by what they are like in the wild.").

[114] *See* Todd S. Aagaard, *Factual Premises of Statutory Interpretation in Agency Review Cases*, 77 GEORGE WASHINGTON LAW REVIEW 366, 382-83 (2009); Brianne J. Gorod, *The Adversarial Myth: Appellate Court Extra-Record Factfinding*, 61 DUKE LAW JOURNAL 1, 43 (2011) (maintaining that "adjudicative and legislative facts are both important in the resolution of legal disputes"). It might thus be misleading to say that legislative facts are not used in law-application. *See* 21B CHARLES ALAN WRIGHT & KENNETH W. GRAHAM, JR., FEDERAL PRACTICE AND PROCEDURE: FEDERAL RULES OF EVIDENCE: RULES 201 TO 400 §5103.2 121 n.23 (2d ed. 2005) (defining legislative facts as "those socio-political facts that courts use when making or interpreting rather than applying the law").

[115] It is nevertheless probably the case that adjudicative facts will be more frequent than legislative because while resolution of a question of fact always needs to involve determination of a fact, many questions of law can be resolved without considering any facts.

whether the fact is – within adjudication[116] – used to resolve a question of fact or a question of law.[117] It is also worth noting that a single adjudicative proceeding may, and often does, work with adjudicative as well as legislative facts.[118]

Further, the very same factual information may once be used to resolve a question of fact and another time a question of law.[119] In other words, adjudicative and legislative facts may be entirely identical; what determines whether the given fact should be seen as adjudicative or legislative is the function that it serves in the given proceeding.[120] This holds also for facts ascertained with the help of economics, such as market power: In *United Air Lines v. Civil Aeronautics Bd.* the court held that findings of market power – albeit usually serving as adjudicative facts –

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[116] *See supra* text accompanying note 50.

[117] *See, e.g.*, Richard B. Cappalli, *Bringing Internet Information to Court: Of "Legislative Facts"*, 75 TEMPLE LAW REVIEW 99, 108 (2002) ("This demonstrates that we cannot calculate whether a fact is adjudicative or legislative by its nature. Instead, the only guideline, admittedly rough, is whether the fact is being utilized to create law on a disputed legal issue, making it 'legislative,' as contrasted to its use in the fact-to-law syllogistic process, making it 'adjudicative.' "); 1 CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, FEDERAL EVIDENCE §60 303 (2d ed. 1994) (Whether a fact should be classified as adjudicative or legislative "depends upon the use made of the . . . fact by the court. If the fact is used to interpret or create a legal standard, it is legislative. If used to supplement the evidence bearing on a factual question in the case, it is adjudicative."); CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, EVIDENCE §2.3 71 (4th ed. 2009) ("Classification of a . . . fact as adjudicative or legislative requires distinguishing questions of fact from questions of law.").

[118] *See* ANGELO N. ANCHETA, SCIENTIFIC EVIDENCE AND EQUAL PROTECTION OF THE LAW 5 (2006) ("In practice, adjudicative fact finding and legislative fact finding are not mutually exclusive processes; in a given case, a court may engage in both types of fact finding.").

[119] *See* United States v. Bello, 194 F.3d 18, 22 (1st Cir. 1999) ("Whether a fact is adjudicative or legislative depends not on the nature of the fact . . . but rather the use made of it (that is, whether it is a fact germane to what happened in the case, or a fact useful in formulating common law policy or interpreting a statute) and the same fact can play either role depending on context."); Todd S. Aagaard, *Factual Premises of Statutory Interpretation in Agency Review Cases*, 77 GEORGE WASHINGTON LAW REVIEW 366, 383 n.86 (2009) ("Whether a particular fact is an adjudicative fact or a premise fact depends not on an inherent characteristic of the fact, but rather on the purpose to which the court puts the fact. The same fact may be an adjudicative fact in one case and a premise fact in another." (citation omitted)); Michael J. Saks, *Judicial Attention to the Way the World Works*, 75 IOWA LAW REVIEW 1011, 1017-18 (1990) ("The facts labelled 'adjudicative' and 'legislative' may be identical. The legal function they serve determines what we call them and what courts may or must do with them." (footnote omitted)).

[120] When an adjudicator does not explain the process that leads to the decision in enough detail, it may be unclear whether a particular fact was used as adjudicative or legislative. *See* Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINNESOTA LAW REVIEW 1, 66 (1988) ("Often one must read judicial opinions closely, however, in search of implicit indications of exactly whether and how the court used a fact determination in its legal reasoning.").

may also be used to formulate legal rules, i.e. as legislative facts.[121] Also competitive effects, as the type of fact on which this article focuses, may be put to these two uses; Parts II and III, in turn, consider each of them.

Finally, the adjudicator – if wielding the necessary power – may even be able to *choose* whether to use a given fact as adjudicative or legislative in a given case. To illustrate, let us assume that there is a rule prohibiting possession of derivatives of coca leaves and that, in the case at bar, the defendant possessed cocaine hydrochloride.[122] Additionally, it is a fact that cocaine hydrochloride is indeed a derivative of cocoa leaves. The adjudicator may use this fact to resolve the respective question of fact – "Did the defendant possess a derivate of coca leaves?" – and then apply the rule, as formulated above, to the findings. Alternatively, however, if she has the power to do so, she could use the fact in resolution of the respective question of law, determining that the applicable rule prohibits possession of cocaine hydrochloride.[123]

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[121] United Air Lines v. Civil Aeronautics Bd., 766 F.2d 1107, 1118-1119 (7th Cir. 1985).

[122] *See* U.S. v. Gould, 536 F.2d 216 (8th Cir. 1976).

[123] *Cf. In re* Asbestos Litigation, 829 F.2d 1233, 1250 (3d Cir. 1987) (Becker, J., Concurring) ("Courts have even elevated the fact finding of a single jury verdict to the position of legislative fact on which to base a rule of law."); Kenneth Culp Davis, *Judicial Notice*, 55 COLUMBIA LAW REVIEW 945, 967-71 (1955) (noting that while some courts addressed the question whether the Communist Party advocated the forcible overthrow of the government as an adjudicative fact, others as a legislative one); Richard D. Friedman, *Standards of Persuasion and the Distinction Between Fact and Law*, 86 NORTHWESTERN UNIVERSITY LAW REVIEW 916, 924 n.22 (1992) ("The difficulty may be that a court often has a choice of how to treat a given fact. For example, an appellate court might say, 'Because we believe factual propositions A through N to be true, we hold legal proposition P to be true.' On the other hand, it might hold that the trial court should instruct the jury, 'If you find that propositions A through N are true, then you should act in accordance with legal proposition P.' Either of these approaches might be appropriate in a given case; the choice will often depend on how recurrent propositions A through N are."); Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINNESOTA LAW REVIEW 1, 63 (1988) ("If the court develops a further elaboration of the norms associated with the minimum contacts test, it is making law, and any fact determination it makes as a premise for the elaboration of the norms is a premise-fact determination. The court may make a fact determination, however, solely for the purpose of resolving credibility issues that determine whether in the case before the court the proof offered has shown by a preponderance of the evidence that the party haled into court did in fact have the particular contacts with the state that the plaintiff claimed, and that the historical facts were sufficient to satisfy the norms established in previous judicial decisions. A determination used for this latter purpose is an adjudicative-fact finding."); Harold L. Korn, *Law, Fact, and Science in the Court*, 66 COLUMBIA LAW REVIEW 1080, 1103 (1966) ("If, for example, first-degree arson is defined as the intentional setting of fire to a dwelling house, and the structure involved in a particular case is an automobile trailer, there is an issue whether such a trailer is a 'dwelling house' within the meaning of the rule. If the court instructs the jury in the terms of the general rule, the issue becomes imbedded with the other jury questions, and in this sense the court is treating the issue as one of fact. If the court itself decides that such a trailer should be considered a 'dwelling house' and so instructs the jury, it will have elaborated the rule of law.").

2. History

The distinction between adjudicative and legislative facts was coined by professor Kenneth Culp Davis.[124] He first introduced it in a 1942 Harvard Law Review article proposing broad principles according to which administrative evidence law ought to be designed.[125] The respective part of the article argued that determination of adjudicative and legislative facts by administrative agencies should be guided by two different sets of rules.[126] Later he returned to the distinction in several other articles[127] as well as in all three editions of his Administrative Law Treatise.[128]

Although Davis originally introduced the concepts of adjudicative and legislative facts as part of his argument about administrative proceedings, he demonstrated their relevance also in the context of factual

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[124] A. Christopher Bryant, *The Empirical Judiciary*, 25 CONSTITUTIONAL COMMENTARY 467, 473 (2009) (talking about the "highly influential distinction Kenneth Culp Davis made between adjudicative and legislative facts"); Kenneth L. Karst, *Legislative Facts in Constitutional Litigation*, SUPREME COURT REVIEW 75, 77 n.9 (1960) ("The phrase [legislative facts] virtually belongs to Professor Kenneth C. Davis . . . ."); Kurtis A. Kemper, *What Constitutes "Adjudicative Facts" Within Meaning of Rule 201 of Federal Rules of Evidence Concerning Judicial Notice of Adjudicative Facts*, 150 AMERICAN LAW REPORT, FEDERAL 543, 553 (1998) ("Professor Kenneth Davis coined the terminology of 'adjudicative' and 'legislative' facts . . . ."); Ronald M. Levin, *The Administrative Law Legacy of Kenneth Culp Davis*, 42 SAN DIEGO LAW REVIEW 315, 320 (2005) ("If one had to choose a single familiar concept in American law that is routinely linked with the name of Kenneth Culp Davis, the choice almost inevitably would be the distinction between 'adjudicative facts' and 'legislative facts.' "); Paul R. Rice, *The Evidence Project: Proposed Revisions to the Federal Rules of Evidence*, 171 FEDERAL RULES DECISIONS 330, 391 (1997) ("Professor Davis coined the terms 'legislative' and 'adjudicative' facts."); Fritz W. Scharpf, *Judicial Review and the Political Question: A Functional Analysis*, 75 YALE LAW JOURNAL 517, 525 (1966) ("These categories have been developed and persistently elaborated by Professor Davis."); Elizabeth G. Thornburg, *The Curious Appellate Judge: Ethical Limits on Independent Research*, 28 THE REVIEW OF LITIGATION 131, 149 (2008) ("This terminology was coined in 1942 by Professor Kenneth Culp Davis …."); 21B CHARLES ALAN WRIGHT & KENNETH W. GRAHAM, JR., FEDERAL PRACTICE AND PROCEDURE: FEDERAL RULES OF EVIDENCE: RULES 201 TO 400 §5102.1 78 (2d ed. 2005) ("Kenneth Culp Davis coined the phrase 'legislative facts' ").

[125] Kenneth Culp Davis, *An Approach to Problems of Evidence in the Administrative Process*, 55 HARVARD LAW REVIEW 364, 402-10 (1942).

[126] *Id.* at 402.

[127] *See, e.g.*, Kenneth Culp Davis, *Official Notice*, 62 HARVARD LAW REVIEW 537, 549 (1949); Kenneth Culp Davis, *Judicial Notice*, 55 COLUMBIA LAW REVIEW 945, 952 (1955); Kenneth Culp Davis, *Facts in Lawmaking*, 80 COLUMBIA LAW REVIEW 931 (1980); Kenneth Culp Davis, *Judicial, Legislative, and Administrative Lawmaking: A Proposed Research Service for the Supreme Court*, 71 MINNESOTA LAW REVIEW 1 (1986).

[128] 2 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §15.03 353-63 (1958); 2 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §§15.2-15.5 138-53 (3 ed. 1971); II KENNETH CULP DAVIS & RICHARD J. PIERCE, JR., ADMINISTRATIVE LAW TREATISE §10.5 141 (3d ed. 1994).

determinations made by courts. Some attention was paid to this context already by the Harvard Law Review article[129] and Davis regularly returned to it also in his later publications.[130] The usefulness of Davis's categorization for court decision-making has subsequently been recognized by a number of rulings[131] as well as by the Federal Rules of Evidence.[132] In short, the distinction "has been highly influential"[133] across various legal fields and "become the conventional wisdom"[134] in the United States.[135]

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[129] Kenneth Culp Davis, *An Approach to Problems of Evidence in the Administrative Process*, 55 HARVARD LAW REVIEW 364, 403-07 (1942).

[130] *See, e.g.*, Kenneth Culp Davis, *Facts in Lawmaking*, 80 COLUMBIA LAW REVIEW 931 (1980).

[131] For a selection of US rulings applying the distinction, see Ben K. Grunwald, *Suboptimal Science and Judical Precedent*, 161 UNIVERSITY OF PENNSYLVANIA LAW REVIEW 1409, 1416 n.45 (2013); Kurtis A. Kemper, *What Constitutes "Adjudicative Facts" Within Meaning of Rule 201 of Federal Rules of Evidence Concerning Judicial Notice of Adjudicative Facts*, 150 AMERICAN LAW REPORT, FEDERAL 543, 553 (1998).

[132] *See* FED. R. EVID. 201(a) (specifying that the federal rule for judicial notice applies only to adjudicative facts and not to legislative facts).

[133] Stephen Gageler, *Fact and Law*, 11 NEWCASTLE LAW REVIEW 1, 18 (2008-2009); *see also* David L. Faigman, *Evidentiary Incommensurability – A Preliminary Exploration of the Problem of Reasoning from General Scientific Data to Individualized Legal Decision-Making*, 75 BROOKLYN LAW REVIEW 1115, 1125 (2010) ("The first, and still most influential, taxonomy of fact-finding in law was offered by Professor Kenneth Culp Davis.").

[134] Frederick Schauer, *The Decline of "The Record": A Comment on Posner*, 51 DUQUESNE LAW REVIEW 51, 56 n.32 (2013); *see also* Ass'n of Nat'l Advertisers, Inc. v. FTC, 627 F.2d 1151, 1162 n.20 (D.C. Cir. 1979) ("The distinction between legislative and adjudicative facts has been widely accepted both within and without this circuit."); Broz v. Schweiker, 677 F.2d 1351, 1357 (11th Cir. 1982) ("The legislative/adjudicative fact distinction, first articulated by Professor Davis . . . has become a cornerstone of modern administrative law theory and has been widely accepted in the federal appellate courts."); Daniel A. Crane, *Enacted Legislative Findings and the Deference Problem*, 102 GEORGETOWN LAW JOURNAL 637, 666 (2014) ("[T]he distinction between adjudicative facts and legislative facts proposed by Kenneth Culp Davis in the middle of the twentieth century [has] since [been] employed canonically to distinguish between two varieties of fact-finding."); Thomas O. McGarity, *Substantive and Procedural Discretion in Administrative Resolution of Science Policy Questions: Regulating Carcinogens in EPA and OSHA*, 67 GEORGETOWN LAW JOURNAL 729, 752 (1979) (speaking about "Professor Davis' almost talismanic distinction between 'legislative' facts and 'adjudicative' facts"); Laurens Walker & John Monahan, *Social Frameworks: A New Use of Social Science in Law*, 73 VIRGINIA LAW REVIEW 559, 561 (1987) ("Though the legislative-adjudicative distinction was developed in the context of administrative law, a broader application ensued and today the usefulness of the distinction is widely recognized."). Davis himself, nevertheless, maintained that courts had implicitly been recognizing the distinction for centuries by treating each type of facts differently. *See, e.g.*, 3 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §15.2 138-42 (2d ed. 1980).

[135] The distinction has been adopted by some other common law systems but is virtually unheard of in civil law countries. For Canadian, New Zealand and South African court decisions invoking the distinction, see Stephen Gageler, *Fact and Law*, 11 NEWCASTLE LAW REVIEW 1, 18 (2008-2009).

It is possible to observe a certain development in Davis's writings on the distinction over the time. Although the definition of the distinction was never entirely unambiguous, his earlier scholarship appears to recognize its analytical understanding (which is adopted by the present article): adjudicative facts are facts used to resolve questions of fact and legislative facts are facts used to resolve questions law. Admittedly, while Davis repeatedly characterized legislative facts as facts used to resolve questions of law,[136] he never defined adjudicative facts through explicit reference to questions of fact. One of the definitions advanced by the first edition of his treatise nevertheless characterized adjudicative facts as "those facts to which the law is applied in the process of adjudication,"[137] which is for all purposes equivalent. As discussed in the following section, however, later Davis's work instead seems to adopt a pragmatic perspective which assigns great weight to the procedural implications of categorizing a fact as adjudicative or legislative.[138]

3. Procedural Implications and the Pragmatic Approach

The procedures applicable to determinations of adjudicative and legislative facts are not the same.[139] After all, what motivated Davis to demarcate the two categories in the first place was his conviction that their

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[136] *See, e.g.*, Kenneth Culp Davis, *An Approach to Problems of Evidence in the Administrative Process*, 55 HARVARD LAW REVIEW 364, 402 (1942) ("When an agency wrestles with a question of law or policy, . . . the facts which inform its . . . judgment may conveniently be denominated legislative facts."); II KENNETH CULP DAVIS & RICHARD J. PIERCE, JR., ADMINISTRATIVE LAW TREATISE §10.4 141 (3d ed. 1994) ("Legislative facts . . . help the tribunal decide questions of law and policy and discretion.").

[137] 2 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §15.03 353 (1958); *see also* Kenneth Culp Davis, *Official Notice*, 62 HARVARD LAW REVIEW 537, 549 (1949); Kenneth Culp Davis, *Judicial Notice*, 55 COLUMBIA LAW REVIEW 945, 952 (1955). This definition has been recognized also be several court decisions. *See* Grason Elec. Co. v. Sacramento Mun. Util. Dist., 571 F.Supp. 1504, 1521 (E.D. Cal. 1983); Marshall v. Bramer, 828 F.2d 355, 357 (6th Cir. 1987).

[138] *See also supra* Part I.A.3 discussing the pragmatic approach to the fact/law dichotomy.

[139] *See, e.g.*, 3 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §16.14 269 (2d ed. 1980) ("Can the same rules of admission or exclusion apply to both adjudicative facts and legislative facts? The answer has to be an unequivocal no. Even though the Federal Rules fail so to provide, they must be interpreted not to apply to evidence about legislative facts."); DAVID L. FAIGMAN, CONSTITUTIONAL FICTIONS: A UNIFIED THEORY OF CONSTITUTIONAL FACTS 45 (2008) ("[C]lassifying the pertinent fact as either adjudicative or legislative makes a considerable difference."); Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINNESOTA LAW REVIEW 1, 14 (1988) ("For the purpose of determining who decides fact disputes, and how, the legal system has developed one set of rules and practices for adjudicative facts and a different set of rules and practices for [legislative] facts." (emphasis omitted)); Allison Orr Larsen, *Confronting Supreme Court Fact Finding*, 98 VIRGINIA LAW REVIEW 1255, 1267 (2012) ("Procedural rules developed for adjudicative facts are largely inapplicable when it comes to legislative facts.").

treatment in court and agency proceedings does and ought to differ.[140] As observed by Faigman, these differences pertain for instance to the identity of the trier of the respective fact, the manner in which evidence concerning it is introduced into the proceedings, or its reviewability on appeal.[141] Nevertheless, despite the above-mentioned wide recognition of the adjudicative/legislative fact distinction, the academic attention directed to these dissimilarities has been rather limited, without – to the author's best knowledge – any attempt to map them comprehensively.[142]

Perhaps the greatest share of explicit scholarly attention has been devoted to a dissimilarity between procedures for adjudicative and legislative facts pertaining to judicial notice.[143] This may be due to it being the only instance of statutory codification of the distinction between the two types of facts and of a differential procedural treatment that they receive. Namely, the Federal Rule of Evidence 201, which regulates judicial notice, states that its strictures apply only to adjudicative facts.[144]

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[140] *See supra* note 126 and accompanying text.

[141] DAVID L. FAIGMAN, CONSTITUTIONAL FICTIONS: A UNIFIED THEORY OF CONSTITUTIONAL FACTS 45 (2008); *see also* Todd S. Aagaard, *Factual Premises of Statutory Interpretation in Agency Review Cases*, 77 GEORGE WASHINGTON LAW REVIEW 366, 398-99 (2009) ("Premise facts and other legislative facts, however, do not conform to the conventional model. De novo judicial factfinding of premise facts is both accepted and, because courts often encounter factual premises not previously addressed by the agency, inevitable."); Bryan L. Adamson, *Federal Rule of Civil Procedure 52(a) as an Ideological Weapon*, 34 FLORIDA STATE UNIVERSITY LAW REVIEW 1025, 1031 (2007) (observing that a clear error standard applies to adjudicative facts while legislative facts are reviewed de novo). *But see* Brianne J. Gorod, *The Adversarial Myth: Appellate Court Extra-Record Factfinding*, 61 DUKE LAW JOURNAL 1, 45 (2011) (arguing that the standard for appellate review of legislative facts is not clear).

[142] One should, however, keep in mind that determination of adjudicative/legislative comprises resolution of questions of fact/law, and the differences between procedures applicable to the facts may thus often get discussed implicitly within the context of the questions. *Cf.* Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINNESOTA LAW REVIEW 1, 21 (1988) ("A decision maker who is authorized to decide an issue of law is authorized to decide any dispute of fact that is a premise for that decision maker's reasoned decision of the issue of law."); Michael J. Saks, *Judicial Attention to the Way the World Works*, 75 IOWA LAW REVIEW 1011, 1019 (1990) ("[T]the treatment of [legislative facts] more closely resembles treatment given law than treatment given facts.").

[143] Some commentators in this context argue that, because of the differences, the term "notice" should be reserved only for adjudicative facts. *See, e.g.*, Richard B. Cappalli, *Bringing Internet Information to Court: Of "Legislative Facts"*, 75 TEMPLE LAW REVIEW 99, 101 (2002) ("Judicially noticeable facts and legislative facts share the characteristic that they are forms of information usable by judges even though the parties to the litigation have not formally presented such facts. The comparison ends there."); Frederick Schauer, *The Decline of "The Record": A Comment on Posner*, 51 DUQUESNE LAW REVIEW 51, 64-65 (2013) (arguing that "judicial notice is not the correct term" with respect to "judicial access" to legislative facts). *But see, e.g.*, Kenneth Culp Davis, *Judicial Notice*, 55 COLUMBIA LAW REVIEW 945, 966 (1955) ("[A]lthough the meaning is not entirely clear as a matter of usage, the term 'judicial notice' probably ought to signify any use by a court of extra-record facts.").

[144] *See also* Coleen M. Barger, *Challenging Judicial Notice of Facts on the Internet*

Notice of legislative facts is, in contrast, constrained by virtually no formal rules.[145] As a result, adjudicators have significantly greater discretion in determination of legislative than adjudicative facts.[146]

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under Federal Rule of Evidence 201, 48 UNIVERSITY OF SAN FRANCISCO LAW REVIEW 43, 48 (2013) ("But this does not mean that a court is precluded from relying upon legislative facts in its decision-making; Rule 201 simply does not cover such facts."); Kurtis A. Kemper, *What Constitutes "Adjudicative Facts" Within Meaning of Rule 201 of Federal Rules of Evidence Concerning Judicial Notice of Adjudicative Facts*, 150 AMERICAN LAW REPORT, FEDERAL 543, 343 (1998) ("Rule 201 applies only to adjudicative facts. Federal courts may also take judicial notice of legislative facts, but the provisions of Rule 201 do not apply when notice of such facts is taken."); CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, EVIDENCE UNDER THE RULES: TEXT, CASES, AND PROBLEMS 732-33 (2011) ("Classification is important because the restriction and procedures of FRE 201 apply only if the matter noticed is an adjudicative fact."); Elizabeth G. Thornburg, *The Curious Appellate Judge: Ethical Limits on Independent Research*, 28 THE REVIEW OF LITIGATION 131, 153 (2008) ("The Federal Rules of Evidence and their state counterparts limit only judicial notice of adjudicative facts.").

[145] *See, e.g.*, FED R. EVID. 201(a) advisory committee's note ("This . . . view which should govern judicial access to legislative facts . . . renders inappropriate any limitation in the form of indisputability, any formal requirements of notice other than those already inherent in affording opportunity to hear and be heard and exchanging briefs, and any requirement of formal findings at any level."); ANGELO N. ANCHETA, SCIENTIFIC EVIDENCE AND EQUAL PROTECTION OF THE LAW 5 (2006) ("[T]here are well-established rules of evidence and court decisions that govern the introduction of scientific evidence used for adjudicative fact finding . . . . But there are no explicit rules or guidelines governing the use of scientific evidence for legislative fact finding . . . ."); Richard B. Cappalli, *Bringing Internet Information to Court: Of "Legislative Facts"*, 75 TEMPLE LAW REVIEW 99, 100 (2002) ("Little law, whether in the form of judicial precedent or court rules, exists to regulate the presentation of [legislative facts] to courts."); *id.* at 103 ("No rules circumscribe how judges may receive legislative facts, it being a matter of their absolute discretion whether and how to consult them."); Edward K. Cheng, *Independent Judicial Research in the Daubert Age*, 56 DUKE LAW JOURNAL 1263, 1290 (2007) ("Judicial notice of legislative facts . . . is basically unregulated."); 3 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §15.4 146 (2d ed. 1980) ("Restrictions on use of legislative facts are almost non-existent but when they exist they are loose and liberal."); *id.* at §15.8 160 ("Law governing the development of facts for lawmaking is largely underdeveloped . . . ."); Peggy C. Davis, *"There is a Book Out ...": An Analysis of Judicial Absorption of Legislative Facts*, 100 HARVARD LAW REVIEW 1539, 1540 (1987) ("[C]ourts and legislatures have failed or refused to regulate the process that has come to be known as judicial notice of legislative facts."); John E. Lopatka & William H. Page, *Economic Authority and the Limits of Expertise in Antitrust Cases*, 90 CORNELL LAW REVIEW 617, 695 (2005) ("[N]o formal rules traditionally constrain the judicial notice of legislative, as opposed to adjudicative, facts . . . ."); Michael J. Saks, *Judicial Attention to the Way the World Works*, 75 IOWA LAW REVIEW 1011, 1017 (1990) ("When facts are necessary to determine a rule, the court is unconstrained in its search for 'legislative facts,' just as it is unconstrained in searching for the correct law."); 21B CHARLES ALAN WRIGHT & KENNETH W. GRAHAM, JR., FEDERAL PRACTICE AND PROCEDURE: FEDERAL RULES OF EVIDENCE: RULES 201 TO 400 §5103.2 125-128 (2d ed. 2005) (reviewing the federal and state rules on judicial notice of legislative facts).

[146] *See, e.g.*, Ben K. Grunwald, *Suboptimal Science and Judical Precedent*, 161 UNIVERSITY OF PENNSYLVANIA LAW REVIEW 1409, 1417 (2013) ("Courts enjoy wide discretion in obtaining and evaluating legislative facts.").

Analogously to the distinction between fact and law, the existence of procedural differences between adjudicative and legislative facts motivates a pragmatic approach to the distinction. Under this approach, a fact is classified as adjudicative or legislative on account of the procedural regime that is desired in respect to the fact in question.[147] This approach is often attributed to courts,[148] who allegedly – seeking to avoid the strictures of Rule 201 – "side-step [the rule], even where a fact is clearly 'adjudicative' in nature, by simply classifying that fact as legislative."[149]

Pragmatic considerations appear to underlie also one of the definitions of adjudicative facts advanced by Davis that encompasses facts "concerning the immediate parties" [150] or "relat[ing] to the parties, their activities, their properties, their businesses."[151] The second edition of Davis's *Administrative Law Treatise* even argued this definition to be the most appropriate one[152] and criticized the *Mainline Investment Corp. v.*

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[147] *See* Brice McAdoo Clagett, *Informal Action – Adjudication – Rule Making: Some Recent Developments in Federal Administrative Law*, 20 DUKE LAW JOURNAL 51, 80 (1971) ("I submit that the distinction between legislative and adjudicative facts may have done more harm than good and that even if a fact can clearly be classified as one or the other, that classification alone sheds very little – if any – light on what procedures are most appropriate for resolving the issue.").

[148] *See, e.g.*, Elizabeth G. Thornburg, *The Curious Appellate Judge: Ethical Limits on Independent Research*, 28 THE REVIEW OF LITIGATION 131, 180 (2008) ("Cases trying to deal with judicial notice, and trying to distinguish between adjudicative fact and legislative fact, can also be better explained as policy decisions about the kind of information judges should be permitted to rely on, and the kinds of procedures they should use when doing so."); 21B CHARLES ALAN WRIGHT & KENNETH W. GRAHAM, JR., FEDERAL PRACTICE AND PROCEDURE: FEDERAL RULES OF EVIDENCE: RULES 201 TO 400 §5103.2 118 (2d ed. 2005) ("[I]n practice courts often elide the distinction to reach a desired result.").

[149] Paul R. Rice, *The Evidence Project: Proposed Revisions to the Federal Rules of Evidence*, 171 FEDERAL RULES DECISIONS 330, 392 (1997); *see also* Lewis W. Beilin, *In Defense of Wisconsin's Judicial Notice Rule*, WISCONSIN LAW REVIEW 499, 517 (2003) ("There is evidence that some judges are simply not willing to give a permissive instruction to a jury if it risks allowing the jury to reach absurd conclusions of fact. There are several ways judges can circumvent the rule. For instance, by classifying the fact as legislative rather than adjudicative, they can give the jury a mandatory instruction (outside the strictures of the judicial notice rule) in keeping with the judge's authority to instruct on matters of law.").

[150] 2 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §15.03 353 (1958); *see also In re Digby*, 47 B.R. 614, 619 (Bankr. N.D. Ala. 1985) ("An 'adjudicative fact' concerns the parties to a proceeding . . . ."); Daniel A. Crane, *Enacted Legislative Findings and the Deference Problem*, 102 GEORGETOWN LAW JOURNAL 637, 666 (2014) ("Adjudicative facts concern the specific circumstances of parties in an adversarial proceeding . . . .").

[151] 2 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §15.03 353 (1958).

[152] 3 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE 147 (2d ed. 1980) (arguing that other definitions of adjudicative facts "can be accurately reduced to the simple statement that adjudicative facts are 'facts concerning the immediate parties' "); *see also id.* at 143, 46, 51, 57.

Gaines[153] decision for treating as adjudicative a fact that did not concern the immediate parties of the controversy,[154] albeit having been used to resolve a question of fact.[155] The following Davis's observation then shows that what motivated him to stress the relation of adjudicative facts to the parties were probably pragmatic considerations: "Facts pertaining to a particular person (whether an individual, a corporation, or an association) are likely to be best known to that person; for that reason fairness requires more procedural protection in finding disputed facts about the person than in finding facts that do not pertain to the particular person."[156] It needs to be reiterated, nevertheless, that procedural treatment of facts as well as the pragmatic approach to the distinction between adjudicative and legislative facts is only tangential to this article.

II. COMPETITIVE EFFECTS AS ADJUDICATIVE FACTS

As discussed in the preceding part, an adjudicative fact is a fact used to resolve a question of fact, which in turn corresponds to the minor premise of a legal syllogism. This part concerns the use of competitive effects as adjudicative facts (adjudicative competitive effects) and also the role played in this context by economics. It is shown that adjudicative competitive effects are *specific* (as opposed to general), being produced by a particular instance of business conduct, the lawfulness of which is under scrutiny. It is also discussed that determination of the specific effects is based on syllogistic reasoning bringing together an economic model and basic facts of the given case. Finally, it is observed that the competitive effects produced by the conduct or merger in question may serve as adjudicative only if they are material under the applicable antitrust rule. Throughout this part, where appropriate, alternative

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[153] Mainline Inv. Corp. v. Gaines, 407 F. Supp. 423 (N.D. Tex. 1976). In this case the court considered as adjudicative the facts that the government intervened into the oil industry and that there was a shortage of fuel oil. A contractual clause applicable to the said case stated that a party was not to be held liable for failure to perform the contract unavoidably resulting from an extraordinary cause over which the party had no control. *Id.* at 426-27 ("Whatever be the status of the economic events of late 1973 and their impact upon the oil industry generally, the issue in this case is whether they were, after November 14, 1973, an 'extraordinary cause' of Gaines' inability to perform under the purchase order contract. These economic events are thus in this case adjudicative facts within the meaning of Section 201 Federal Rules of Evidence.").

[154] 3 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE 150-51 (2d ed. 1980).

[155] *Cf.* CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, EVIDENCE UNDER THE RULES: TEXT, CASES, AND PROBLEMS 737 (2011) ("Are not many adjudicative facts . . . unrelated to the immediate parties?"); CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, EVIDENCE §2.2 66 (4th ed. 2009) ("This aspect of the description is less useful and potentially misleading. Courts have frequently found facts to be 'adjudicative' . . . even though they have no unique or special relationship to either the litigants or the dispute.").

[156] *See* 3 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §15.3 146 (2d ed. 1980).

definitions of adjudicative facts advanced by the literature[157] are introduced in order to reflect on a certain aspect of using competitive effects as adjudicative facts.

A. Specific Effects (Facts of the Particular Case)

An often-mentioned attribute of adjudicative facts is that they are specific rather than general. One should nevertheless be careful when dealing with this aspect of the distinction between adjudicative and legislative facts because it may easily become confusing. Consider, for instance, Davis' observation that not all adjudicative facts are specific.[158] Giving the example of "facts about IBM's business practices in forty countries," he argues that these facts might serve as adjudicative even if they are quite general.[159] To be sure, such facts may indeed be considered general due to the sheer scope of the practices in question. On the other hand, one could say that the practices are actually specific – namely to IBM, to the given territory (forty countries) and to the given time period. Speaking about specificity and generality of facts in the abstract may thus be misleading.

For our purposes, it is more helpful to say that adjudicative facts – and competitive effects as their kind – are specific in the sense that they arise within a particular case. This characterization of adjudicative facts appears for instance in the Advisory Committee's Note to Rule 201 of the Federal Rules of Evidence: "Adjudicative facts are simply the facts of the particular case."[160] To avoid misunderstanding, such facts do not include

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[157] For a compilation of some of the definitions, see, e.g., 21B CHARLES ALAN WRIGHT & KENNETH W. GRAHAM, JR., FEDERAL PRACTICE AND PROCEDURE: FEDERAL RULES OF EVIDENCE: RULES 201 TO 400 §5103.3 140-141 (2d ed. 2005).

[158] 3 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §15.3 144 (2d ed. 1980); *see also* Elizabeth G. Thornburg, *The Curious Appellate Judge: Ethical Limits on Independent Research*, 28 THE REVIEW OF LITIGATION 131, 155 (2008) ("[N]ot all general information is legislative fact.").

[159] 3 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §15.3 144 (2d ed. 1980).

[160] *See also* ("Todd S. Aagaard, *Factual Premises of Statutory Interpretation in Agency Review Cases*, 77 GEORGE WASHINGTON LAW REVIEW 366, 386 (2009) ("[A]djudicative facts of a case are endogenous to the case – indeed, they define the case . . ."); MCCORMICK ON EVIDENCE §331 611 (Kenneth S. Broun ed., 7th ed. 2013) (defining adjudicative facts as "historical facts pertaining to the incidents which give rise to lawsuits"); Richard B. Cappalli, *Bringing Internet Information to Court: Of "Legislative Facts"*, 75 TEMPLE LAW REVIEW 99, 100 (2002) (defining adjudicative facts as "facts about the antecedents leading to the case brought to court"); David L. Faigman, et al., *Using the Structure of Scientific Research to Distinguish between Admissibility and Weight in Expert Testimony*, 110 NORTHWESTERN UNIVERSITY LAW REVIEW 859, 886 (2016) ("Adjudicative facts are relevant to the resolution of particular cases."); Paul R. Rice, *The Evidence Project: Proposed Revisions to the Federal Rules of Evidence*, 171 FEDERAL RULES DECISIONS 330, 384 (1997) ("Adjudicative facts are those facts that gave rise to and must be proved to resolve the action." (proposing a change to the Federal Rule of Evidence 201)); *id.* at 390 ("[A]djudicative facts deal with the dispositive facts of the case which are in controversy between the parties.");

any facts considered in an adjudicative proceeding – as discussed above, not only adjudicative facts but also legislative facts may be determined within its course.[161] Thus, to capture only the former, it is more accurate to speak about "facts about the particular event which gave rise to the lawsuit."[162]

Let us examine how this applies to adjudicative competitive effects. They always concern a particular event,[163] in the sense that they are brought about by it. The event can fall within one of the following two categories. First, it can be an instance of market conduct vis-à-vis the business partners or competitors.[164] This conduct is then engaged in either by a single business (unilateral conduct) or by several businesses jointly (collusion), whether on the basis of an explicit agreement or not. The conduct does not necessarily amount to an isolated discrete act but may also be continuous in character. Determination of the competitive effects exerted by an instance of business conduct then amounts to determination of an adjudicative fact. Second, the event can be a corporate transaction leading to higher market concentration (merger). The effects resulting from a unilateral exercise of market power by the merged entity (unilateral effects) and/or the effects of post-merger coordination between the entity and its competitors (coordinated effects) also count as adjudicative competitive effects. For brevity, market conduct as well as corporate transactions will be in the following referred to jointly as business conduct. With respect to either, the adjudicator needs to ascertain effects that are specific to it.

B. Past and Future Effects

It should be interjected here that adjudicative competitive effects may

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Frederick Schauer, *The Decline of "The Record": A Comment on Posner*, 51 DUQUESNE LAW REVIEW 51, 56 (2013) (defining adjudicative facts as "[f]acts about the particular controversy"); MARTIN A. SCHWARTZ, SECTION 1983 LITIGATION: FEDERAL EVIDENCE §5.02 (5th ed. Supp ed. 2018) (defining adjudicative facts as "the facts of the particular controversy that gave rise to the judicial proceeding"); *id.* at §5.05 (defining adjudicative facts as "the facts relevant to the particular case"); Elizabeth G. Thornburg, *The Curious Appellate Judge: Ethical Limits on Independent Research*, 28 THE REVIEW OF LITIGATION 131, 136 (2008) ("[A]djudicative facts [are] facts that are at issue in the particular case".).

[161] *Supra* note 114 and accompanying text. That is why the following definition of adjudicative facts offered by Kemper may be misleading: "[A]djudicative facts . . . are simply the particular facts developed in a lawsuit." Kurtis A. Kemper, *What Constitutes "Adjudicative Facts" Within Meaning of Rule 201 of Federal Rules of Evidence Concerning Judicial Notice of Adjudicative Facts*, 150 AMERICAN LAW REPORT, FEDERAL 543, §3 556 (1998).

[162] MCCORMICK ON EVIDENCE §328 594 (Kenneth S. Broun ed., 7th ed. 2013).

[163] *Cf.* Herbert Hovenkamp, *Economic Experts in Antitrust Cases*, *in* 5 MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY 965, 1003 (David L. Faigman, et al. eds., 2017) (observing that "in the typical antitrust case the challenged violation is a damaging but *single* act" (emphasis added)).

[164] The archetypal type of business conduct is pricing. Other kinds of business conduct pertain for instance to product quality, service levels and product range.

concern past as well as future effects. Admittedly, the use of past tense in some definitions of adjudicative facts, such as Monaghan's facts concerning the question "what happened here,"[165] appears to suggest otherwise. It is also true that adjudication is frequently argued to be retrospective by its nature.[166] In reality, however, adjudication may pertain to various future issues, as evidenced for instance by the examples provided by Landes and Posner.[167] Accordingly, Jaffe argues that an assertion of adjudicative fact "is the assertion that a phenomenon has happened or is or will be happening,"[168] which is to say that "[t]he phenomenon may be past, present, or future."[169]

To be sure, due to the uncertainty inevitable associated with predictions of the future state of the world, some might find it strange to refer to such predictions as to facts.[170] Nevertheless, upon a closer look, a finding of a future fact is not different in character from any other finding of fact.[171] Like all facts, future facts concern "what is" rather than "what ought to be." Moreover, a certain level of uncertainty may be involved in determination of not only future but also past facts because, often, "it is

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[165] Henry P. Monaghan, *Constitutional Fact Review*, 85 COLUMBIA LAW REVIEW 229, 235 (1985) (emphasis omitted). This applies also to the definition of adjudicative fact as facts concerning "who *did* what, where, when, how, and with what motive or intent" (emphasis added). *See infra* note 212 and accompanying text.

[166] *See, e.g.*, George P. Fletcher, *Paradoxes in Legal Thought*, 85 COLUMBIA LAW REVIEW 1263, 1291 (1985) ("Rulemaking addresses itself ex ante to a general category of cases; rule application focuses ex post on the fitting of the rule to a particular set of facts.").

[167] William M. Landes & Richard A. Posner, *The Economics of Anticipatory Adjudication*, 23 JOURNAL OF LEGAL STUDIES 683 (1994) (considering costs and benefits of this "anticipatory" adjudication).

[168] Louis L. Jaffe, *Judicial Review: Question of Law*, 69 HARVARD LAW REVIEW 239, 241 (1955). *See also* Bryan L. Adamson, *Federal Rule of Civil Procedure 52(a) as an Ideological Weapon*, 34 FLORIDA STATE UNIVERSITY LAW REVIEW 1025, 1047 (2007) (speaking about "acts, events, or conditions which have occurred, which currently exist, or even which might occur"); Mirjan Damaška, *Truth in Adjudication*, 49 HASTINGS LAW JOURNAL 289, 299 (1998) ("[A]djudicative fact-finding is not merely a matter of reconstructing historical events. While most facts we seek to establish indeed lie in the past, some exist at the time of inquiry. Still other facts . . . consist of predictions of future events."); *cf.* Ronald J. Allen & Michael S. Pardo, *The Myth of the Law-Fact Distinction*, 97 NORTHWESTERN UNIVERSITY LAW REVIEW 1769, 1791 (2003) (arguing that predictions about the future, such as "if a hurricane hits Miami much damage will be done," have factual nature)

[169] Louis L. Jaffe, *Judicial Review: Question of Law*, 69 HARVARD LAW REVIEW 239, 241 (1955); *see also* Michael Evan Gold, *Levels of Abstraction in Legal Thinking*, 42 SOUTHERN ILLINOIS UNIVERSITY LAW JOURNAL 117, 127 (2018) ("A prediction may be an adjudicative fact.").

[170] Louis L. Jaffe, *Judicial Review: Question of Law*, 69 HARVARD LAW REVIEW 239, 242 (1955) ("[P]sychologically we may feel that an inference as to the past is 'true,' an inference as to the future only 'probable.' "). *See also infra* notes 224 – 227 and accompanying text.

[171] *Id.*.

not within the power of man absolutely to know the past."[172]

As regards economics, it may be used to determine past as well as future competitive effects.[173] Economic determination of past and future competitive effects is not markedly different – roughly the same method is used to find out whether a provision of fidelity rebates ten years ago produced adverse competitive effects or whether similar rebates will have such effects if they are provided in a year.[174] It is nevertheless true that competitive effects relevant under the applicable antitrust rules will often be prospective and that economics will thus be used to predict the future.[175] In this context, one should not get confused by the fact that

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[172] *Id.*; *see also* Albert A. Foer, *Prediction and Antitrust*, 56 ANTITRUST BULLETIN 505, 511 (2011) ("[D]etermining the truth of a past event is not always easy and in some cases can be approached only by assertions of probability . . . ."); Eric Gippini-Fournier, *The Elusive Standard of Proof in EU Competition Cases*, 33 WORLD COMPETITION 187, 196 (2010) (arguing that "the assumption that it is possible to aim at higher certainty as regards what has already happened" frequently does not hold because "in practice the past is often as uncertain as the future").

[173] *See, e.g.*, David J. Gerber, *The Future of Article 82: Dissecting the Conflict*, *in* EUROPEAN COMPETITION LAW ANNUAL 2007: A REFORMED APPROACH TO ARTICLE 82 37, 49 (Claus-Dieter Ehlermann & Mel Marquis eds., 2008) (arguing that the role of positive economics is to answer questions such as "what happened in the past or what can be expected to happen in the future").

[174] Most commentators consider findings concerning past competitive effects more accurate. *See, e.g.*, Oliver Budzinski, *Modern Industrial Economics: Open Problems and Possible Limits*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 111, 128 (Josef Drexl, et al. eds., 2011) ("In backward-oriented areas, predominantly or even exclusively dealing with the detection of things that happened in the past, modern industrial-economics instruments perform much better and are less controversial than in areas where the forward-oriented, predictive part is very important."); Laurence Idot, *Modern Industrial Economics Revisited – Comments on Daniel Rubinfeld, Michele Polo and Oliver Budzinski*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 139, 141 (Josef Drexl, et al. eds., 2011) ("It is of course easier to adopt a right and appropriate decision when a retrospective analysis can be made like for cartels. It is much more difficult when there is a bet on what will happen in the future, even if it is a near future. We face this issue in merger control, but also in many antitrust cases of exclusionary abuses, such as the *Microsoft* case."). Some nevertheless contend that determination of effects is always challenging, be they past or future. *See, e.g.*, Eric Gippini-Fournier, *The Elusive Standard of Proof in EU Competition Cases*, 33 WORLD COMPETITION 187, 196-97 (2010) ("A central distinction in the Court's approach may not be so much between past and future facts as between personal acts and the consequences of those acts in the presence of exogenous circumstances which may not be entirely in the hands of the undertakings. The latter are often causation issues, which can usually only be proved by inferences. . . . Causation is only rarely mechanical and automatic. Adjudicating on causation always requires the decision maker to draw inferences from imprecise and necessarily incomplete information, whether it refers to future events or past events." (emphases omitted)).

[175] *See, e.g.*, Jonathan B. Baker, *Market Definition: An Analytical Overview*, 74 ANTITRUST LAW JOURNAL 129, 159 (2007) ("In some antitrust cases, including most merger reviews as well as agreements or exclusionary conduct evaluated before the conduct has been implemented for long, the alleged harm to competition is prospective. The problem for the enforcement agency or court is to evaluate likely competitive effects

economic determination of *any* effects is often dubbed their "prediction." That is to say that economic predictions of competitive effects do not necessarily refer to future effects.[176] Rather, the term is to be understood technically, having the same meaning as a "conclusion."[177]

C. Syllogistic Determination of Effects

Scientific determination of adjudicative facts proceeds in a deductive, syllogistic format. This observation was made three decades ago by Imwinkelried:

> Although scientific propositions are derived inductively, in the courtroom scientific testimony is ordinarily presented in a deductive, syllogistic format. The attorney calling a scientific witness typically wants the witness to apply a scientific principle to some fact in the case to illuminate the significance of that fact. The witness evaluates the facts from the perspective of the general principle. Suppose, for instance, that a personal injury plaintiff calls a physician as an expert on the issue of damages. The physician will rely, at least implicitly, on a major premise. The physician's premise might be that a particular symptomatology (the presence of symptoms A, B, and C) proves the existence of brain injury D. . . . The physician applies that major premise to the facts of the case, namely, plaintiff's case history. The symptoms displayed by this specific plaintiff are the witness' minor premise. That case history might show that

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in the future, after the conduct under review has taken place."); Albert A. Foer, *Prediction and Antitrust*, 56 ANTITRUST BULLETIN 505, 508 (2011) ("[O]ften the case is about future effects that may yet be felt."); Thomas G. Krattenmaker, et al., *Monopoly Power and Market Power in Antitrust Law*, 76 GEORGETOWN LAW JOURNAL 241, 245 (1987) ("[A]ntitrust analysis often requires predicting what may happen in the future as a result of recent or proposed behavior."); Abraham L. Wickelgren, *Issues in Antitrust Enforcement*, *in* RESEARCH HANDBOOK ON THE ECONOMICS OF ANTITRUST LAW 267, 267 (Einer Elhauge ed., 2012) ("An antitrust authority can either review and decide whether or not to prohibit conduct before it is undertaken (ex ante enforcement, commonly used in merger enforcement) or wait until after the conduct has occurred and evaluate it after observing (at least some of) its effects (ex post enforcement).").

[176] *See, e.g.*, Willam Dugger, *Methodological Differences between Institutional and Neoclassical Economics*, 13 JOURNAL OF ECONOMIC ISSUES 899, 900 (1979) (observing that "a prediction often refers to something in the past"); Rebecca Haw Allensworth, *Law and the Art of Modeling: Are Models Facts?*, 103 GEORGETOWN LAW JOURNAL 825, 833 (2015) (arguing that "typically the most useful feature of a model is its ability to *predict* or measure what is unknown or unseen, such as the future or a counterfactual *past*" (emphases added)); Thomas B. Leary, *The Inevitability of Uncertainty*, 3 COMPETITION LAW INTERNATIONAL 27, 28 (2007) ("[V]irtually all antitrust analysis involves predictions. This is obviously true when it is necessary to evaluate the future competitive effects of a pre-notified merger or of a competitive strategy that has just been announced. Predictions are also required, however, when analysing the competitive effects of past conduct. In this case, of course, there will be evidence of what has already happened in the marketplace, but it is still necessary to weigh this outcome against a prediction of what would have occurred in an alternative universe without the conduct."); *cf.* RICHARD A. POSNER, THE PROBLEMS OF JURISPRUDENCE 204 (1990) ("[M]uch scientific prediction, too, is really postdiction; many of the events 'predicted' by astronomers occurred billions of years ago.").

[177] *See* Rebecca Haw Allensworth, *Law and the Art of Modeling: Are Models Facts?*, 103 GEORGETOWN LAW JOURNAL 825, passim (2015).

> plaintiff has experienced symptoms A, B, and C. The result of applying the major to the minor premise is a conclusion, the witness' opinion on the merits of the case. In our hypothetical case, given the expert's major premise, plaintiff's case history supports the opinion that plaintiff suffers from brain injury D.[178]

This observation applies also with respect to determination of competitive effects with the help of economics.[179]

To be sure, Imwinkelried made his observation with respect to expert testimonies made by scientific witnesses.[180] The syllogistic nature of such testimonies is recognized also by *Daubert*[181] and Federal Rule of Evidence 702, which both understand a scientific testimony as an outcome of applying general scientific methods to the specific facts of the case. Nevertheless, the same process takes place also when the adjudicator performs its own in-house analysis, as it happens for instance in the EU competition agencies. To illustrate, if competitive effects of a merger need to be determined, an economist testifying as an expert witness will proceed in the same way as an economist employed by the agency assessing the merger; they will both apply an economic model (major premise) to the facts of the case (minor premise) to find out what the competitive effects of the merger would be (conclusion).

Note that the – *scientific* – syllogism explained by Imwinkelried is different from the *legal* syllogism discussed above (see Figure 1). The scientific syllogism (economic model) applies a major factual premise (economic methodology/theory) to a minor factual premise (apparent facts of the case) in order to find out another fact relevant to the case (what competitive effects were or will be produced by the conduct or merger at stake). The legal syllogism, in contrast, applies a major legal premise (legal rule) to a minor factual premise (competitive effects as facts of the case) in order to find out whether something (the conduct or merger at stake) is lawful or not. The two syllogisms are nevertheless related – the conclusion of the scientific syllogism enters the legal syllogism as its

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[178] Edward J. Imwinkelried, *The "Bases" of Expert Testimony: The Syllogistic Structure of Scientific Testimony*, 67 NORTH CAROLINA LAW REVIEW 1, 2-3 (1988) (footnotes omitted).

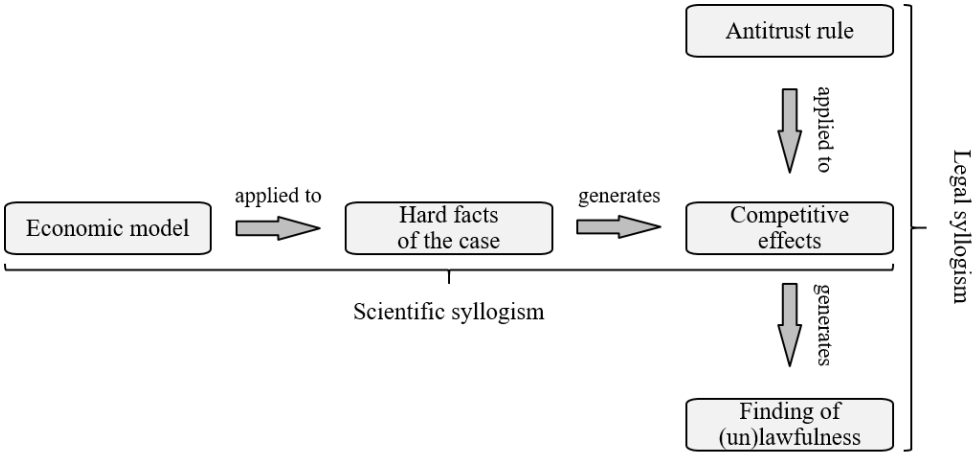
[179] *See, e.g.*, Maureen Brunt, *Antitrust in the Courts: The Role of Economics and of Economists*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 1998 357, 362 (Barry E. Hawk ed., 1999) (observing that antitrust economists use available theory to construct a syllogistic model, "which has the form: since A + B are present, C follows").

[180] *See also* Federal Rule of Evidence 702 (specifying that an expert testimony needs to be "based upon sufficient facts or data" (minor premise) and "the product of reliable principles and methods" (major premise), and that the principles and methods need to be applied reliably to the facts of the case (conclusion)); Michael J. Saks, *Judicial Attention to the Way the World Works*, 75 IOWA LAW REVIEW 1011, 1021 (1990) ("Any time an expert is asked to offer an opinion, the expert is relying on a framework: the expert's field's general knowledge is being brought to bear in asserting some fact about the particular case.").

[181] Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993).

minor premise.

Figure 1



1. The Problem of Fit

Perhaps the greatest difficulty in accurate determination of competitive effects of a business conduct or merger concerns selection of an appropriate major premise, i.e. economic model (theory[182]). This is known as the problem of fit,[183] identification problem,[184] or model selection problem.[185] Ideally, the model should account for all factors that are relevant for the determination of the competitive effects of the conduct or merger at stake, and it should do so accurately.[186] The said problem

[182] *Cf.* Ioannis Lianos, *Categorical Thinking in Competition Law and the 'Effects-based' Approach in Article 82 EC*, *in* ARTICLE 82 EC: REFLECTIONS ON ITS RECENT EVOLUTION 19, 21 (Ariel Ezrachi ed., 2009) ("An effects-based approach does not reject the need for categorical thinking. The identification of a theory of consumer harm involves a process of categorisation of the practice as falling within the boundaries of a specific theory, eg raising rivals' cost, leveraging, predation, maintenance of monopoly strategy, a two-sided market situation. Specific effects will follow from the classification of the practice as falling within a specific antitrust theory.").

[183] *See, e.g.*, Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 591 (1993); *cf.* John L. Solow & Daniel Fletcher, *Doing Good Economics in the Courtroom: Thoughts on Daubert and Expert Testimony in Antitrust*, 31 JOURNAL OF CORPORATION LAW 489, 500 (2006) ("*Daubert* requires that the testimony fit the facts of the case, not the actual case (or argument) put forth by the plaintiffs.").

[184] *See, e.g.*, Lars-Hendrik Röller, *Economic Analysis and Competition Policy Enforcement in Europe*, *in* MODELLING EUROPEAN MERGERS THEORY, COMPETITION POLICY AND CASE STUDIES 11, 17 (Peter A. G. van Bergeijk, et al. eds., 2005).

[185] *See, e.g.*, Joshua D. Wright, *Abandoning Antitrust's Chicago Obsession: The Case for Evidence-based Antitrust*, 78 ANTITRUST LAW JOURNAL 241, 241 (2012).

[186] *See, e.g.*, Gregory J. Werden, *Making Economics More Useful in Competition Cases: Procedural Rules Governing Expert Opinions*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 2005 601, 609 (Barry E. Hawk ed., 2006) ("[E]xpert economic testimony in a competition case is directed to the actual or likely effects of real-world conduct and therefore must be firmly grounded in the particular facts relating to that conduct.").

then consists in the fact that it is often not clear which model accurately accounts for all relevant factors and that, consequently, several different models – possibly leading to different conclusions – might be considered acceptable.[187]

Still, there are two complementary ways of assessing the fit of a model with the given case, each based on comparing an element of the modelling exercise with the reality.[188] First, one may check the extent to which observed facts are reflected by the *assumptions* of the model.[189] To be

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[187] *E.g.*, United States v. Mitchell, 365 F.3d 215, 245 (3d Cir. 2004) ("Experts with diametrically opposed opinions may … both have good grounds for their views …."); HERBERT HOVENKAMP, ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION 46 (2005) ("[O]ften all that economists can do is produce data that are consistent with the theory, but cannot rule out alternative explanations. As a result there are far too many instances when a particular kind of business conduct has more than one explanation, and no one can completely rule out alternatives. . . . Often there are sensible explanations pointing in both directions." (footnote omitted)); 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 Enforcement*, 9 EUROPEAN COMPETITION JOURNAL 67, 69 (2013) ("Those familiar with economic theory will know that a large number of results can often be reversed by making an alternative assumption."); Geoffrey A. Manne & Joshua D. Wright, *Innovation and the Limits of Antitrust*, 6 JOURNAL OF COMPETITION LAW AND ECONOMICS 153, 163 (2010) ("[A] regulator or court has a broad spectrum of models to choose from when analyzing an antitrust issue, but antitrust has not provided that decision-maker with sensible criteria for making that model selection decision."); Gregory J. Werden, *Making Economics More Useful in Competition Cases: Procedural Rules Governing Expert Opinions*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 2005 601, 609 (Barry E. Hawk ed., 2006) ("Opposing economic experts may legitimately perceive facts differently or take different views of which facts are critical."); Joshua D. Wright, *Abandoning Antitrust's Chicago Obsession: The Case for Evidence-based Antitrust*, 78 ANTITRUST LAW JOURNAL 241, 255 (2012) ("A proliferation of models with indeterminate predictions – especially in Post-Chicago and Behaviorist School theories – calls for generalist judges to select amongst competing and increasingly sophisticated economic theories in resolving any given case.").

[188] *Cf.* Gregory J. Werden, *Making Economics More Useful in Competition Cases: Procedural Rules Governing Expert Opinions*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 2005 601, 609 (Barry E. Hawk ed., 2006) (arguing that "expert economic testimony in a competition case is directed to the actual or likely effects of real-world conduct and therefore must be firmly grounded in the particular facts relating to that conduct").

[189] *See, e.g.*, 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 Enforcement*, 9 EUROPEAN COMPETITION JOURNAL 67, 69 (2013) ("The economic model being used to inform the competitive assessment should reflect the key features of competition in the industry under investigation."); Yves Botteman, *Mergers, Standard of Proof ad Expert Economic Evidence*, 2 JOURNAL OF COMPETITION LAW AND ECONOMICS 71, 78 (2006) ("[T]he selection and use of economic theories should be supported by the facts."); Rebecca Haw Allensworth, *Law and the Art of Modeling: Are Models Facts?*, 103 GEORGETOWN LAW JOURNAL 825, 844 (2015) (arguing that "models should … strive to incorporate realistic assumptions"); Penelope Papandropoulos, *Implementing an Effects-based Approach under Article 82*, CONCURRENCES 1, 3 (2008) (speaking about ex ante validation); Lars-Hendrik Röller,

sure, this does not mean that the model needs to reflect every institutional detail of the industry in question[190] with models, after all, being useful because they to some extent abstract from the reality;[191] still, an economic inquiry into adjudicative competitive effects does need to pay significant attention to the specificities of the given case.[192] Second, it can be examined to what extent *predictions* of the model correspond with what have been observed in the reality.[193] Models can usually be adapted so that their assumptions and predictions reflect reality more closely, which process is known as their calibration.[194]

2. Classification of Economic Models (and Their Conclusions)

Economic models and other major premises of scientific syllogisms have a factual character because they concern the question "what is"

Economic Analysis and Competition Policy Enforcement in Europe, *in* MODELLING EUROPEAN MERGERS THEORY, COMPETITION POLICY AND CASE STUDIES 11, 17 (Peter A. G. van Bergeijk, et al. eds., 2005).

[190] *See, e.g.*, Gregory J. Werden, *The Admissibility of Expert Testimony*, *in* I ISSUES IN COMPETITION LAW AND POLICY, 812 (ABA Section of Antitrust Law ed., 2008) ("[T]hat does not mean that the model must reflect every institutional detail of an industry.").

[191] *See, e.g.*, *id.* ("Economic models are meant to be abstractions and are useful because they abstract from real world minutiae.").

[192] *See, e.g.*, *id.* (arguing that "an economic model used to make predictions must fit the facts of the industry to which it is applied").

[193] *See, e.g.*, 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 Enforcement*, 9 EUROPEAN COMPETITION JOURNAL 67, 70 (2013) ("Good economics requires that the models/arguments being presented are able to explain observed competitive behaviour."); Rebecca Haw Allensworth, *Law and the Art of Modeling: Are Models Facts?*, 103 GEORGETOWN LAW JOURNAL 825, 842 (2015) ("If the model is powerful to 'predict' actual events … then that strengthens the inference that it can accurately "predict" an unobservable event …."); Penelope Papandropoulos, *Implementing an Effects-based Approach under Article 82*, CONCURRENCES 1, 3 (2008) (speaking about ex post validation); Lars-Hendrik Röller, *Economic Analysis and Competition Policy Enforcement in Europe*, *in* MODELLING EUROPEAN MERGERS THEORY, COMPETITION POLICY AND CASE STUDIES 11, 17 (Peter A. G. van Bergeijk, et al. eds., 2005); Richard Schmalensee, *On the Use of Economic Models in Antitrust: The ReaLemon Case*, 127 UNIVERSITY OF PENNSYLVANIA LAW REVIEW 994, 995 (1979) ("If a model is to be used to make predictions about economic effects, ... the model's predictions should not conflict in important ways with the facts at hand."); Gregory J. Werden, *Making Economics More Useful in Competition Cases: Procedural Rules Governing Expert Opinions*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 2005 601, 609 (Barry E. Hawk ed., 2006) ("The critical test is whether a model explains reasonably well those aspects of past industry performance the model is being used to predict. For example, if a model is being used to predict prices for the years following a proposed merger, it should be able to explain pricing for the years before the merger.").

[194] *See, e.g.*, Gregory J. Werden, *The Admissibility of Expert Testimony*, *in* I ISSUES IN COMPETITION LAW AND POLICY, 811 (ABA Section of Antitrust Law ed., 2008) ("Making an economic model fit the specific quantitative facts of an industry is a process called 'calibration.' ").

rather than "what ought to be." One may thus ask how they fit into the adjudicative and legislative fact categories.

As mentioned above, under the analytical approach, whether a fact is adjudicative or legislative depends on the purpose to which it is employed. Strictly speaking, the premises of a scientific syllogism do not directly interact with the applicable substantive rule, only its conclusion does. Still, by informing the conclusion, the premises – including economics models – help to resolve a question of fact,[195] and are thus analytically species of adjudicative facts.[196] This approach appears to be adopted for instance in Laster v. Celotex Corp.[197] In this case, the court considered information concerning effects of asbestos on health as a major premise for case-specific fact determinations. It concluded that this general knowledge constitutes an adjudicative fact.[198]

Often, however, authorities do not view economic models and other major premises as adjudicative facts.[199] For instance, the Canadian Federal Court of Appeal has observed that "[t]he test or analytical framework that is to be adopted in determining whether the products offered by two merging firms are a 'close substitute,' and therefore in the same product market, is a question of law."[200] Also many scholars have argued that economic models should not be seen as adjudicative facts.[201]

There are two possible reasons why economic models are said to be something else than adjudicative facts. First, the law specifies which

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[195] *See infra* Part II.D.2.

[196] *See* Rebecca Haw Allensworth, *Law and the Art of Modeling: Are Models Facts?*, 103 GEORGETOWN LAW JOURNAL 825, 828 (2015) ("[O]ften, courts treat models … like issues of fact."); Elizabeth G. Thornburg, *The Curious Appellate Judge: Ethical Limits on Independent Research*, 28 THE REVIEW OF LITIGATION 131, 156 (2008) (observing that major premises "are also applied to resolve a disputed issue in the particular case, and in that sense they are adjudicative facts").

[197] Laster v. Celotex Corp., 587 F. Supp. 542 (S.D. Ohio 1984); *see also* Hardy v. Johns-Manville Sales Corp., 681 F.2d 334, 347-48 (5th Cir. 1982).

[198] Laster v. Celotex Corp., 587 F. Supp. 542, 543 (S.D. Ohio 1984) ("Clearly, the facts pertaining to whether asbestosis and mesothelioma are caused by exposure to asbestos are 'adjudicative facts' under Rule 201.").

[199] *See, e.g.*, Elizabeth G. Thornburg, *The Curious Appellate Judge: Ethical Limits on Independent Research*, 28 THE REVIEW OF LITIGATION 131, 147 (2008) ("Courts have been hesitant to treat knowledge of general factual information as facts 'in dispute in the proceeding'.").

[200] Director of Investigation and Research v. Southam Inc., 127 D.L.R.4th 263, 290 (1995).

[201] *E.g.*, Rebecca Haw Allensworth, *Law and the Art of Modeling: Are Models Facts?*, 103 GEORGETOWN LAW JOURNAL 825, 828 (2015); *see also* 3 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §15.5 149 (2d ed. 1980) ("[T]ables for finding an automobile's speed from the length of skid marks do not contain adjudicative facts … even though they are used to find the speed of the particular … automobile at the time it skidded."); Michael J. Saks, *The Aftermath of Daubert: An Evolving Jurisprudence of Expert Evidence*, 40 JURIMETRICS 229, 235 (2000) ("The soundness of scientific theories and general applications are comparable to matters of law; the soundness of specific applications are matters of fact.").

major premise is to be used in resolution of cases of a certain kind. This does not concern the substantive rule applicable to these cases but rather a procedural rule regulating how questions of fact are to be resolved.[202] Such procedural rule may come to existence incrementally through case law: "[Q]uestions of fact … may become questions of law if a [modelling] issue becomes sufficiently well settled that the plausibility of alternatives is not worth litigating."[203] Analytically speaking, the model is in these instances not an adjudicative fact anymore; it truly becomes the law.

Second, the law does not specify the model to be used but rather allows the adjudicating body to use one that will lead to as accurate determination of the case facts as possible. At the same time, some pragmatic reason dictates that the model should not be labeled as an adjudicative fact but as a legislative fact or law. The reason may for instance be to allocate selection between different available models to a judge rather than a jury because the former is believed to be better situated for this task.[204] The labeling may also allow review of the selected model on appeal. From the analytical perspective, in these instances, the model remains an adjudicative fact.

This pragmatic approach exists also with respect to conclusions generated by the models. In *Comcast Corp. v. Behrend*, the Supreme Court stated that "what an econometric model proves … is no more a question of fact than what our opinions hold."[205] Haw Allensworth has

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[202] Note, however, that fixing the economic model by law is functionally equivalent to changing the substantive rule. Assessing resale price maintenance under a rule-of-reason approach based on an economic model that invariably leads to a finding of anti-competitiveness would bring about the same outcome as per se prohibition of resale price maintenance. *Cf.* Gordon G. Young, *United States v. Klein, Then and Now*, 44 LOYOLA UNIVERSITY CHICAGO LAW JOURNAL 265, 305 (2012) ("Giving Congress power to change the definition of the facts that constitutional rules make operative would be the same thing as giving it the power to change the Constitution itself.").

[203] Herbert Hovenkamp, *Fact, Value and Theory in Antitrust Adjudication*, 1987 DUKE LAW JOURNAL 897, 903 (1987); *see also* Bailey v. Allgas, Inc., 148 F. Supp. 2d 1222, 1245 (N.D. Ala. 2000) (excluding an expert's opinion on the definition of the relevant market because the used methodology "runs contrary to well-established law").

[204] Rebecca Haw Allensworth, *Law and the Art of Modeling: Are Models Facts?*, 103 GEORGETOWN LAW JOURNAL 825, 830 (2015) ("Under the pragmatic view of the fact/law distinction, models … fail to qualify as facts because the indeterminacy of individual modeling choices makes judges – more educated than juries and repeat players – better suited to their evaluation."); Elizabeth G. Thornburg, *The Curious Appellate Judge: Ethical Limits on Independent Research*, 28 THE REVIEW OF LITIGATION 131, 181 (2008) ("Doctrinally, it is often incorrect to say that [major premises] are not part of the fact questions to be decided in a particular case. From the perspective of 'who should decide,' however, it is possible to argue, as in other law/fact debates, that judges are better suited to process complex general information and that decisions about science and social science can influence nonparties just as law can. So, the argument goes, even though quite factual in nature, these general issues should be defined as 'law' or 'legislative facts' in order to allocate the decisional power to the judge.").

[205] Comcast Corp. v. Behrend, 133 S. Ct. 1426, 1433 n.5 (2013).

approved this judgment, arguing that not only models themselves but also their results should not receive the procedural treatment that is afforded to adjudicative facts.[206]

While classification of models and their conclusions in practice does have significant implications, these do not concern the fundamental distinction at the core of this article: using economics in deciding on the content of antitrust rules and in determination of facts to which the rules are to be applied. In other words, under all of the discussed approaches to models and their conclusions, economics-based identification of competitive effects in the latter context invariably amounts to identifying past or future effects brought about by a particular instance of business conduct or merger. The findings of the remainder of this chapter also apply regardless of how one classifies models and model conclusions.

D. Effects Material under the Applicable Rule

1. Materiality

The above observation that adjudicative facts are facts about the particular event which gave rise to the lawsuit requires an essential qualification. To be employable as adjudicative, the given fact about the event in question needs to "matter" or "count" in the respective proceeding.[207] This feature of adjudicative facts has traditionally been called their *materiality*.[208] Nevertheless, as this term may easily be confused with other characteristics of adjudicative facts,[209] Federal Rule of Evidence 401 now, instead, speaks about a "fact that is *of consequence* to the determination of the action" (emphasis added).[210] Which facts are material (consequential) then depends primarily on the applicable

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[206] Rebecca Haw Allensworth, *Law and the Art of Modeling: Are Models Facts?*, 103 GEORGETOWN LAW JOURNAL 825, 828 (2015). *But see infra* note 227 and accompanying text.

[207] *See* Korematsu v. United States, 584 F. Supp. 1406, 1414 (N.D. Cal. 1984) ("Adjudicative facts are usually those facts that are in issue in a particular case."); 1 CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, FEDERAL EVIDENCE §83 398 (2d ed. 1994) (talking about "what facts count, given the legal issues").

[208] *See, e.g.*, McColm v. Santa Clara County 1997 WL 33016 (N.D. Cal. Jan. 15, 1997) (defining adjudicative facts as facts that "have a tendency in reason to prove or disprove some *material* issue in the case" (emphasis added)).

[209] *See* 1 CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, FEDERAL EVIDENCE §83 412 (2d ed. 1994); 22 CHARLES ALAN WRIGHT & KENNETH W. GRAHAM, JR., FEDERAL PRACTICE AND PROCEDURE: EVIDENCE: RULE 401 (2012)§5162.1 45.

[210] The rule concerns materiality and probative value as two elements of relevance born by evidence. The present article does not concern the latter element. *See* MCCORMICK ON EVIDENCE §185 994 (Kenneth S. Broun ed., 7th ed. 2013) ("There are two components to relevant evidence: materiality and probative value. Materiality concerns the fit between the evidence and the case. It looks to the relation between the propositions that the evidence is offered to prove and the issues in the case. If the evidence offered to help prove a proposition that is not a matter in issue, the evidence is immaterial." (reference omitted)). *See supra* note **Error! Bookmark not defined.** and accompanying text.

substantive rule[211] – material are only those facts that matter for the assessment of lawfulness of the challenged conduct under the respective rule.

Against this background, consider one of the definitions of adjudicative facts according to which these facts concern "who did what, where, when, how, and with what motive or intent."[212] Granted, by providing an inventory of issues that typically constitute adjudicative facts, this definition is relatively comprehensible and instructive. By the same token, however, its enumerative character might mislead one into believing that issues not included in the list never happen to constitute adjudicative facts, while in reality there are many adjudicative facts that fit none of the pigeonholes. This is because many other types of facts may count under a legal rule. In other words, if material under the applicable rule, also facts concerning the question "what competitive effects were or will be[213] brought about by the scrutinized business conduct?" are adjudicative.

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[211] CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, EVIDENCE §4.2 157 (4th ed. 2009) (citing Philips v. Western Co. of N. Am., 953 F.2d 923, 930 (5th Cir. 1992)); *see also* Bryan L. Adamson, *Federal Rule of Civil Procedure 52(a) as an Ideological Weapon*, 34 FLORIDA STATE UNIVERSITY LAW REVIEW 1025, 1047 (2007) ("[T]he legal context itself determines which facts are articulated: those perceived to be relevant to responding to the legal issues raised or those needed to respond to the process."); Edward W. Cleary, *Presuming and Pleading: An Essay on Juristic Immaturity*, 12 STANFORD LAW REVIEW 5, 6 (1959) ("[T]he law recognizes certain elements as material to the case, and the presence or absence of each of them is properly to be considered in deciding the case. (footnote omitted)); 1 CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, FEDERAL EVIDENCE §83 412 (2d ed. 1994) ("Of course the substantive law is the foundational reference that helps determine what facts are of consequences to the determination of a suit."); MARTIN A. SCHWARTZ, SECTION 1983 LITIGATION: FEDERAL EVIDENCE §1.02 (5th ed. Supp ed. 2018) ("The facts that are 'of consequence to the determination of the action' depend primarily upon the substantive law governing the plaintiff's claim for relief and the defenses asserted by the defendant. In other words, the substantive law that governs the claims and defenses informs the parties and the courts as to the facts that will matter in the litigation." (footnote omitted)); *cf.* Laurens Walker & John Monahan, *Social Facts: Scientific Methodology as Legal Precedent*, 76 CALIFORNIA LAW REVIEW 877, 883 (1988) ("In the context of social fact evidence, this means that even research flawlessly executed is inadmissible if the substantive law governing the case does not put in issue the fact that the research seeks to establish."). Note that a fact does not need to be in dispute in order to be material. 1 CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, FEDERAL EVIDENCE §83 413 (2d ed. 1994). *But see* 22 CHARLES ALAN WRIGHT & KENNETH W. GRAHAM, JR., FEDERAL PRACTICE AND PROCEDURE: EVIDENCE: RULE 401 §5164 103 (2012) (arguing that "material facts must be disputed, but undisputed facts can be consequential facts" (internal quotation marks omitted)).

[212] 2 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §15.03 353 (1958); *see also* Elizabeth G. Thornburg, *The Curious Appellate Judge: Ethical Limits on Independent Research*, 28 THE REVIEW OF LITIGATION 131, 180 (2008) (defining adjudicative facts as facts "about who did what to whom").

[213] For a discussion of the temporal dimension of adjudicative competitive effects, see *supra* Part II.B.

2. Inferring Ultimate Facts from Subsidiary Facts

Evidentiary doctrine conventionally distinguishes between two types of adjudicative facts: ultimate facts and subsidiary facts.[214] Ultimate facts are facts to which the law gets directly applied.[215] For instance, if the applicable law states that the speed limit on a highway is 70 mph, it is an ultimate fact that a particular driver at the bar was driving 90 mph on the highway because it immediately follows from this fact that the driver broke the law. In other words, an ultimate fact is a fact serving as a minor premise of a legal syllogism, which means that its determination in itself constitutes resolution of a question of fact as it was defined above.[216] As regards competitive effects, if the applicable rule renders them material, they typically serve as ultimate facts[217] – the effects of an instance of business conduct or merger under scrutiny are decisive for whether it will be found lawful or unlawful.

Often, it is not possible to prove the ultimate fact directly. In such cases, it needs to be inferred from other – directly provable – facts. These facts are then known as subsidiary[218] and the evidence proving them as

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[214] *See, e.g.*, DAVID P. LEONARD, et al., EVIDENCE: A STRUCTURED APPROACH 70 (3d ed. 2012) ("Adjudicative facts need not be ultimate facts . . . ; they include any facts along the chain of reasoning leading to those ultimate facts."); 1 CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, FEDERAL EVIDENCE §83 413 (2d ed. 1994) (observing that the term "fact of consequence" includes "[f]acts that are themselves elements of claims or defenses" as well as "facts that support one or more inferences to elements in claims or defenses").

[215] *See, e.g.*, East v. Romine, Inc., 518 F.2d 332, 339 (5th Cir. 1975) (arguing that "a question of fact [that] is, at the same time, the ultimate issue for resolution in th[e] case" constitutes an ultimate fact); Richard B. Cappalli, *Bringing Internet Information to Court: Of "Legislative Facts"*, 75 TEMPLE LAW REVIEW 99, 106 (2002) (arguing that a fact is ultimate "if it represents a specific instance of one of the general propositions in the rule of law sought to be applied" (citing Jerome Michael, *The Basic Rules of Pleading*, 5 RECORD OF THE ASSOCIATION OF THE BAR OF THE CITY OF NEW YORK 175, 184 (1950))); Ellen E. Sward, *Appellate Review of Judicial Fact-Finding*, 40 UNIVERSITY OF KANSAS LAW REVIEW 1, 29 (1991) ("The ultimate fact is the factual conclusion . . . to which a legal consequence applies.").

[216] To be more precise, with many laws allowing defendants to raise "defenses," an ultimate fact should be understood as the minor premise of an offense or defense syllogism. *See, e.g.*, DAVID P. LEONARD, et al., EVIDENCE: A STRUCTURED APPROACH 70 (3d ed. 2012) (defining ultimate facts as "facts necessary to the success of a charge, claim, or defense"). As a matter of fact, since an offense or defense may comprise a number of elements, *see, e.g.*, Andrew I. Gavil, *Competition Policy, Economics and Economists: Are We Expecting Too Much?*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 2005 575, 577 (Barry E. Hawk ed., 2006) ("Offenses are often broken down into elements, and elements into sub-elements."), there is potentially an ultimate fact concerning each such element. *See, e.g.*, 1 CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, FEDERAL EVIDENCE §48 260 n.16 (2d ed. 1994) ("Adjudicative facts may . . . be ultimate facts, such as the elements of a charge, claim, or defense . . . .").

[217] *See* Arthur D. Austin, *A Priori Mechanical Jurisprudence in Antitrust*, 53 MINNESOTA LAW REVIEW 739, 739 n.4 (1968) ("Seen in an evidentiary context, competitive effects are ultimate facts." (internal quotation marks omitted)).

[218] *See* Bryan L. Adamson, *Federal Rule of Civil Procedure 52(a) as an Ideological*

indirect or circumstantial.[219] This indirect determination plays an essential role with regard to competitive effects because, as Massel puts it, "[t]he trial of economic issues in an antitrust case almost always turns on indirect or circumstantial evidence."[220] An economics-based inquiry into

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Weapon, 34 FLORIDA STATE UNIVERSITY LAW REVIEW 1025, 1056-57 (2007) ("Subsidiary facts might best be described as those which serve as premises for the ultimate fact." (internal quotation marks omitted)); Robert J. Gregory, *Whose Reasonable Doubt? Reconsidering the Appropriate Role of the Reviewing Court in the Criminal Decision Making Process*, 24 AMERICAN CRIMINAL LAW REVIEW 911, 942 n.192 (1987) (observing that courts also call these facts secondary or collateral, and citing Richardson v. State, 600 S.W.2d 818, 823 (Tex. Crim. App. 1980) (secondary fact); Metz v. State, 9 Md. App. 15, 21, 262 A.2d 331, 334 (1970) (collateral fact)); Ellen E. Sward, *Appellate Review of Judicial Fact-Finding*, 40 UNIVERSITY OF KANSAS LAW REVIEW 1, 29 (1991) ("The ultimate fact is the factual conclusion, drawn from subsidiary facts, to which a legal consequence applies.").

Inference from subsidiary to ultimate facts should not be confused with inference from a piece of evidence (evidential fact) to a subsidiary or ultimate fact. *See, e.g.*, Robert J. Gregory, *Whose Reasonable Doubt? Reconsidering the Appropriate Role of the Reviewing Court in the Criminal Decision Making Process*, 24 AMERICAN CRIMINAL LAW REVIEW 911, 941-42 (1987) ("Circumstantial evidence . . . generally involves two distinct inferences. As with direct evidence, the fact finder infers the occurrence of a particular fact from a witness' testimony. Thus, the testimonial inference is employed to shift from the matter asserted by the witness to the truth of such matter. Unlike direct evidence, however, the matter asserted does not itself establish an ultimate fact. The fact finder, therefore, in order to reach such fact, is asked to derive the fact by use of an additional inference that logically connects the testimonial and ultimate facts." (footnotes omitted)). Evidential issues – including this type of inference – are not considered by this article.

Furthermore, inference from subsidiary to ultimate facts should not be confused with law application. Zuckerman warns against this confusion providing a burglary example. Adrian A. S. Zuckermann, *Law, Fact or Justice?*, 66 BOSTON UNIVERSITY LAW REVIEW 487, 489-90 (1986) (citing WESLEY NEWCOMB HOHFELD, FUNDAMENTAL LEGAL CONCEPTIONS AS APPLIED IN JUDICIAL REASONING (Walter Wheeler Cook ed., 1964)). He says that the move from the statement "X put his arms through the window" to the conclusion that "X entered the building" is not a factual inference but rather a legal assessment. Adrian A. S. Zuckermann, *Law, Fact or Justice?*, 66 BOSTON UNIVERSITY LAW REVIEW 487, 490 (1986). It needs to be recognized, however, that in adjudicatory practice the process of drawing a factual inference may blend with application of the law to it. *See* Ray A. Brown, *Fact and Law in Judicial Review*, 56 HARVARD LAW REVIEW 899, 903 (1943); Kathleen L. Coles, *Mixed up Questions of Fact and Law: Illinois Standards of Appellate Review in Civil Cases Following the 1997 Amendment to Supreme Court Rule 341*, 28 SOUTHERN ILLINOIS UNIVERSITY LAW JOURNAL 13, 33 (2003); *supra* notes 102 – 108 and accompanying text.

[219] *See, e.g.*, Robert J. Gregory, *Whose Reasonable Doubt? Reconsidering the Appropriate Role of the Reviewing Court in the Criminal Decision Making Process*, 24 AMERICAN CRIMINAL LAW REVIEW 911, 940-42 (1987).

[220] Mark S. Massel, *Legal and Economic Aspects of Competition*, 1960 DUKE LAW JOURNAL 157, 184 (1960); *see also id.* (maintaining that if a "case requires proof that competition has been lessened [we] cannot find any direct evidence of this phenomena, since the lessening of competition is an analytical conclusion"); Mark S. Massel, *Economic Analysis in Judicial Antitrust Decisions*, 20 AMERICAN BAR ASSOCIATION ANTITRUST SECTION 46, 51 (1962) (arguing that "most economic issues in antitrust depend on circumstantial evidence").

competitive effects regularly starts by scanning the raw evidence for relevant facts;[221] they may concern the conduct under scrutiny as well as the environment in which it took place, such as the structure of the industry, the firms, and the structure of demand and the technology.[222] Subsequently, inferences about competitive effects are drawn from these facts. An eventual inference to an adverse effect on competition is then usually advanced as a "theory of harm."[223]

It ought to be added that the evidence doctrine frequently couches the adjudicative use of economics in terms that might be confusing for our purposes. Namely, a distinction is often drawn between "facts," on the one hand, and expert "opinion" or "assessment" based on these facts, on the other.[224] Nevertheless, this distinction is meant to subdivide – and

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[221] Maureen Brunt, *Antitrust in the Courts: The Role of Economics and of Economists*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 1998 357, 362 (Barry E. Hawk ed., 1999).

[222] *See, e.g.*, Malcolm B. Coate & Jeffrey H. Fischer, *Can Post-Chicago Economics Survive Daubert?*, 34 AKRON LAW REVIEW 795, 828 (2001) ("In an antitrust case, expert economic testimony generally attempts to infer actual or prospective market effects from potentially problematic behavior, as well as from evidence on the structure and performance of the market."); Eric Gippini-Fournier, *The Elusive Standard of Proof in EU Competition Cases*, 33 WORLD COMPETITION 187, 196-97 (2010) ("A central distinction in the Court's approach may . . . be . . . between personal acts and the consequences of those acts in the presence of exogenous circumstances which may not be entirely in the hands of the undertakings." (emphases omitted)).

[223] *See, e.g.*, Arndt Christiansen & Christian Ewald, *Best Practices for Expert Economic Opinions – Key Element of Forensic Economics in Competition Law*, *in* PUBLIC AND PRIVATE ENFORCEMENT OF COMPETITION LAW IN EUROPE 141, 145 (Kai Hüschelrath & Heike Schweitzer eds., 2014) ("The term 'theory of harm' refers to a conceptual framework that specifies the way in which competition is actually harmed (or is likely to be so if future conduct is concerned) by a given behaviour. This framework is used to organize the facts of the case in question."); Andrew I. Gavil, *Defining Reliable Forensic Economics in the Post-Daubert/Kumho Tire Era: Case Studies from Antitrust*, 57 WASHINGTON AND LEE LAW REVIEW 831, 843 (2000) ("First and foremost, the plaintiff must establish a coherent theory of anti-competitive effects, collusive, exclusionary or both. But the theory alone will not be enough. Assembling sufficient proof to support or defeat the theory will invariably take the parties down the road of economic analysis and expert testimony."); Ioannis Lianos, *Lost in Translation? Towards a Theory of Economic Transplants*, 62 CURRENT LEGAL PROBLEMS 346, 391 (2009) ("The theory of harm has the objective to establish a relation of causality between the specific practice and the consumer detriment."); Anne Perrot, *Managing Cases under the Effects-based Approach: The Experience of the French Competition Authority*, *in* TEN YEARS OF EFFECTS-BASED APPROACH IN EU COMPETITION LAW: STATE OF PLAY AND PERSPECTIVES 415, 417 (Jacques Bourgeois & Denis Waelbroeck eds., 2012) ("The theory of harm explains the mechanism through which [a firm's] strategy has a negative effect on competition, i.e. how and on which markets competition is dampened. The "story" that results from this analysis should be economically consistent and compatible with the facts and data relative to the case.").

[224] In the European Union, doctrine distinguishes between "facts" and "complex economic assessments" based on these facts. *See, e.g.*, Andriani Kalintiri, *What's in a Name? The Marginal Standard of Review of "Complex Economic Assessments" in EU Competition Enforcement*, 53 COMMON MARKET LAW REVIEW 1283 (2016); Bo Vesterdorf, *Economics in Court: Reflections on the Role of Judges in Assessing*

distinctly regulate the discrete steps of – the fact-finding process rather than to suggest that expert inferences do not concern factual issues.[225] After all, economics-based inferences concerning the relevant market or market power, as concepts closely related to competitive effects,[226] have been viewed as facts by the courts.[227]

Economic Theories and Evidence in the Modernised Competition Regime, *in* LIBER AMICORUM IN HONOUR OF SVEN NORBERG: A EUROPEAN FOR ALL SEASONS 511, 517, 22-25 (Martin Johansson, et al. eds., 2006).

[225] As regards inference of facts from other facts, see, e.g., Bryan L. Adamson, *Federal Rule of Civil Procedure 52(a) as an Ideological Weapon*, 34 FLORIDA STATE UNIVERSITY LAW REVIEW 1025, 1047 (2007) (asserting that inferences and deductions drawn from other facts are themselves "couched as facts"); Robert J. Gregory, *Whose Reasonable Doubt? Reconsidering the Appropriate Role of the Reviewing Court in the Criminal Decision Making Process*, 24 AMERICAN CRIMINAL LAW REVIEW 911, 941-42 (1987) (discussing inference of ultimate facts from other facts); 2 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §30.02 194 (1958) ("drawing inferences from established facts is a part of the fact-finding process"); Richard M. Mosk, *The Role of Facts in International Dispute Resolution*, 304 COLLECTED COURSES OF THE HAGUE ACADEMY OF INTERNATIONAL LAW 9, 32 (2003) (asserting that "there are facts that can be inferred from the perceived facts"); Robert L. Stern, *Review of Findings of Administrators, Judges and Juries: A Comparative Analysis*, 58 HARVARD LAW REVIEW 70, 93-94 (1944) ("A man's intent may be proved directly by what he said or circumstantially from what he did; in the latter situation the trier of fact is required to infer from other evidence what was in a man's mind. But the drawing of the inference is still the finding of a fact . . . .").

[226] *See, e.g.*, FTC v. Ind. Fed'n of Dentists, 476 U.S. 447, 460-61 (1986) ("Since the purpose of the inquiries into market definition and market power is to determine whether an arrangement has the potential for genuine adverse effects on competition, proof of actual detrimental effects, such as a reduction of output, can obviate the need for an inquiry into market power, which is but a surrogate for detrimental effects." (internal quotations omitted)); Jan Broulík, *Two Contexts for Economics in Competition Law: Deterrence Effects and Competitive Effects*, *in* NEW DEVELOPMENTS IN COMPETITION LAW AND ECONOMICS, 35-37 (Klaus Mathis & Avishalom Tor eds., 2019); Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEXAS LAW REVIEW 1, 22 (1984) (observing that "[m]arket definition is just a tool in the investigation of market power"); Barry E. Hawk & Nathalie Denaeijer, *The Development of Articles 81 and 82 EC Treaty: Legal Certainty*, *in* EUROPEAN COMPETITION LAW ANNUAL 2000: THE MODERNIZATION OF EC ANTITRUST POLICY 129, 136-37 (Claus-Dieter Ehlermann & Isabela Atanasiu eds., 2001) ("The logical first step of a robust analysis would be to inquire into the effects of the practice on prices or output. Effect on prices and output often is very difficult to prove, however. Market power (and market definition) frequently serves as an alternative method to gauge effective prices or output.").

[227] *See, e.g.*, Gordon v. Lewistown Hosp., 272 F. Supp. 2d 393, 420 (M.D. Pa. 2003) ("The existence of market power is a question of fact." (citing Fineman v. Armstrong World Indus., Inc., 980 F.2d 171, 199 (3d Cir.1992); Weiss v. York Hosp., 745 F.2d 786, 825 (3d Cir.1984))); ASCAP v. Showtime/The Movie Channel, Inc., 912 F.2d 563, 569-70 (2d Cir. 1990) (arguing that market power is a matter of fact that "may be ascertained with the aid of expert opinions"); Phonetele, Inc. v. AT&T Co., 889 F.2d 224, 232 (9th Cir. 1989) ("The definition of the relevant market is a factual inquiry reversible only for clear error."); Westman Commc'n Co. v. Hobart Int'l, Inc., 796 F.2d 1216, 1220 (10th Cir. 1986) ("We recognize that market definition is a question of fact . . . and we thus review the district court's definition of relevant market under the 'clearly erroneous' standard."); Kaiser Aluminum & Chem. Corp. v. FTC, 652 F.2d 1324, 1329

3. Rule of Reason and Per Se Rules

As mentioned, materiality of competitive effects depends on the applicable substantive rule. Antitrust doctrine has developed a typology of legal rules reflecting whether competitive effects are material or not under the given rule. On the one hand, lawfulness of certain types of business practices is assessed under what is known as the rule of reason. Application of this rule entails an inquiry into the competitive effects of the practice under scrutiny.[228] With economic methods being particularly well suited for such an inquiry,[229] proceedings applying rule of reason display extensive reliance on economics.[230] On the other hand, there are also rules of "per se" lawfulness and unlawfulness. The facts material under these rules do not include competitive effects.

E. Implications for Economics

Part II has so far demonstrated that adjudicative competitive effects are competitive effects of a specific instance of business conduct under legal scrutiny in so far as these effects are material under the applicable rule. These features have significant practical implications for usefulness of economics in determination of adjudicative competitive effects. More specifically, to be useful, the economic inquiry needs to be relevant with regard to both the case and the legal rule governing it. These two criteria

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(7th Cir. 1981) ("The definition of relevant markets within which to measure the effects on competition of the proposed acquisition is a question of fact. As such, the Commission's findings as to relevant markets are to be accorded great deference and are to be upheld if supported by substantial evidence."); Douglas H. Ginsburg & Joshua D. Wright, *Philadelphia National Bank: Bad Economics, Bad Law, Good Riddance*, 80 ANTITRUST LAW JOURNAL 377, 386 (2015) (noting that "[m]arket definition is a question of fact"). *But see supra* note 206 and accompanying text.

[228] Maurice E. Stucke, *Does the Rule of Reason Violate the Rule of Law?*, 42 UNIVERSITY OF CALIFORNIA DAVIS LAW REVIEW 1375, 1379 (2009); *see also* Roger D. Blair & D. Daniel Sokol, *The Rule of Reason and the Goals of Antitrust: An Economic Approach*, 78 ANTITRUST LAW JOURNAL 471, 475 (2012) ("It is clear that the rule of reason is aimed at determining the competitive effects of a business practice under review."); Andrew I. Gavil, *On the Utility of Direct Evidence of Anticompetitive Effects*, 19 ANTITRUST 59, 60 (2005) (talking about "competitive effects as the benchmark of the rule of reason"); Barry E. Hawk & Nathalie Denaeijer, *The Development of Articles 81 and 82 EC Treaty: Legal Certainty*, *in* EUROPEAN COMPETITION LAW ANNUAL 2000: THE MODERNIZATION OF EC ANTITRUST POLICY 129, 134 (Claus-Dieter Ehlermann & Isabela Atanasiu eds., 2001) (observing that the rule of reason entails some inquiry into the competitive effects of the practice or agreement).

[229] *See supra* note 43 and accompanying text.

[230] *See, e.g.*, Louis Kaplow, *Antitrust, Law & Economics, and the Courts*, 50 LAW AND CONTEMPORARY PROBLEMS 181, 195 (1987) ("The rule of reason might appear to have a natural affinity with economic analysis because the rule requires consideration of all the economically relevant factors . . . ."); Maarten Pieter Schinkel, *Forensic Economics in Competition Law Enforcement*, 4 JOURNAL OF COMPETITION LAW AND ECONOMICS 1, 5 (2008) ("In fact, the application of IO economics is often most powerful in investigations that come under the rule of reason.").

correspond with the two limbs of Federal Rule of Evidence 401, according to which "[e]vidence is relevant if (a) it has any tendency to make a fact more or less probable than it would be without the evidence; and (b) the fact is of consequence in determining the action."

1. Relevance to the Case

First, the analysis needs to be relevant with regard to the facts of the case. Adjudicative competitive effects are specific competitive effects of a specific instance of business conduct.[231] This means that economic analyses setting out to determine these effects need to pay a close attention to the specific characteristics of the conduct in question as well as of the environment in which it takes place.[232] To put it the other way around, economic analyses that ignore the context of the particular case will be of little use.

The requirement that economic inquiries into adjudicative competitive effects need to take proper account of the specificities of the given case manifests itself in the legal concept of probative value. Captured by the first limb of Federal Rule of Evidence 401, probative value of evidence refers to its ability to make facts more or less probable than they would be without the evidence,[233] i.e. to prove them or disprove them. The probative value of an economic inquiry into competitive effects will thus be the higher the more or less probable the effects will be made by the inquiry. Federal Rule of Evidence 702(d), which implements the Supreme Court's approach developed in *Daubert*, may then be understood as more precisely specifying that an element of the probative value of an expert testimony is its fit with the basic facts of the case.[234] That is to suggest that the probative value of the economic inquiry into competitive effects will increase with its fit to the case facts.

Another legal concept at play here is admissibility. When evidence is inadmissible, it may not be introduced to the fact-finder. A joint reading of Federal Rules of Evidence 401 and 402 shows that only evidence with at least some probative value may be admitted. Federal Rule of Evidence 702 further specifies conditions of admissibility of expert testimony, stating in its letter (d) that the expert needs to have among other things "reliably applied the principles and methods to the facts of the case." If the expert has failed to do so, her testimony will be excluded. Under this rule, courts have frequently found economic analyses inadmissible in antitrust cases because of their assumptions and/or predictions not being grounded in the reality of the case.[235]

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[231] See Section A.

[232] See Section C.1.

[233] FED. R. EVID. 401(a).

[234] Calvin William Sharpe, *Reliability Under Rule 702: A Specialized Application of 403*, 34 SETON HALL LAW REVIEW 289, 300 (2003).

[235] For an overview of cases, see Gregory J. Werden, *The Admissibility of Expert Testimony*, *in* I ISSUES IN COMPETITION LAW AND POLICY, 810-14 (ABA Section of

2. Relevance to the Applicable Rule

To be helpful to the adjudicator, an economic analysis of competitive effects also needs to be relevant as regards the law. When assessing the lawfulness of an instance of business conduct, it is meaningful to consider its competitive effects only if the applicable rule associates the lawfulness with the effects. However, if the applicable rule tests lawfulness according to other criteria, as for instance per se prohibitions or per se permissions do, there is no point in taking the effects into consideration. The effects are then irrelevant and the only rational approach is to disregard them.

As discussed above, this aspect of relevance is known as materiality. It does concerns the fact to be proved by the evidence.[236] Federal Rules of Evidence 401 and 402 jointly provide that materiality is another condition of admissibility of evidence. This is confirmed for expert testimony by Federal Rules of Evidence 702(a), which states that to be admissible the testimony needs to "help the trier of fact … to determine a fact in issue". If the proffered testimony concerns a fact that is not material under the applicable rule, it will be excluded. This holds also for testimonies on competitive effects in cases governed by per se rules.[237]

Take the progeny of the *Leegin* case[238] as an illustration. As is well known, this case concerned an arrangement between a supplier and a retailer pursuant to which the retailer could not sell the product in question to final consumers below a price suggested by the supplier, also known as a resale-price maintenance arrangement. Acting as the defendant, the supplier wanted to introduce evidence – including an expert testimony – concerning the competitive effects of the arrangement. The evidence was supposed to prove that the effects were socially benign because the supplier lacked market power and because the arrangement fostered inter-brand competition. However, at the time of the trial, resale price maintenance arrangements were governed by a rule prohibiting them per se.[239] The ultimate question in the case thus was whether the arrangement between the supplier and the retailer indeed constituted a resale-price maintenance arrangement. Since to answer this question the adjudicator does not need know about the competitive effects of the arrangement, the district court correctly refused the defendant's evidence on these effects.

Antitrust Law ed., 2008).

[236] FED. R. EVID. 401(b).

[237] David Eisenstadt & James Langenfeld, *The Role of Economics in Truncated Rule of Reason Analysis*, 28 ANTITRUST 52, 52 (2014) (observing that in cases governed by a per se rule economics "plays a limited role in the determination of liability"); John E. Lopatka & William H. Page, *Economic Authority and the Limits of Expertise in Antitrust Cases*, 90 CORNELL LAW REVIEW 617, 645 (2005) ("For example, the Court's retention of the per se rule against horizontal price fixing forecloses the use of expert (or other) testimony to show that a naked cartel agreement, if established by direct evidence, did not cause competitive harm in a particular case.").

[238] Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877 (2007)

[239] Dr. Miles Medical Co. v. John D. Park and Sons, 220 U.S. 373 (1911).

The constraints imposed by the applicable substantive rule may not be circumvented by disregarding it. Expert witnesses testifying to the trier of facts need to be "[t]aking the law as given."[240] To be sure, antitrust economists acting in this capacity "may have views on the economic appropriateness of the legal rules that determine the outcome of the case."[241] They, nevertheless, "must accept the limits of the existing law and operate within them,"[242] and their eventual opinion on the rule to be applied needs to be disregarded by the trier of facts.

Courts do regularly exclude expert testimonies that provide advice as to which antitrust rule is applicable in the case at hand. One such example is *In Re Cardizem CD Antitrust Litigation*: "[T]he testimony of [the] expert … opining that the … [a]greement should be analyzed under the rule of reason rather than the per se rule, inappropriately renders an opinion on a question of law that rests solely within the province of the Court and thus is not considered here."[243] Similarly, *City of Tuscaloosa v. Altria Group* found that the expert's "opinions regarding the legal standards applicable to the case are outside his competence as an economist . . . and should be excluded".[244] And in *Aventis Envtl. Sci. USA LP v. Scotts Co.*, the court observed that the expert's argument that "the negative effect on competition is not by itself an issue, unless such adverse effect is the result of conduct that would otherwise make no legitimate business sense . . . runs counter to the applicable law and usurps [the court's] role in instructing the jury as to the appropriate legal

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[240] John O. Ward & Gerald W. Olson, *Forensic Economics: A Perspective and An Agenda for Research*, 1 JOURNAL OF FORENSIC ECONOMICS 1, 2 (1987). *See also* Gregory J. Werden, *The Admissibility of Expert Testimony*, *in* I ISSUES IN COMPETITION LAW AND POLICY, 807 (ABA Section of Antitrust Law ed., 2008) ("An economist also may have specialized knowledge of antitrust law, but an economist's testimony may not cross the fine line between economic analysis and antitrust law.").

[241] Stephen Breyer, *Economics for Lawyers and Judges*, 33 JOURNAL OF LEGAL EDUCATION 294, 301 (1983).

[242] Mark S. Massel, *Legal and Economic Aspects of Competition*, 1960 DUKE LAW JOURNAL 157, 176 (1960). *See also* Wulf-Henning Roth, *The "More Economic Approach" and the Rule of Law*, *in* THE MORE ECONOMIC APPROACH TO EUROPEAN COMPETITION LAW 37, 38 (Dieter Schmidtchen, et al. eds., 2007). *But see* Andrew I. Gavil, *After Daubert: Discerning the Increasingly Fine Line between the Admissibility and Sufficiency of Expert Testimony in Antitrust Litigation*, 65 ANTITRUST LAW JOURNAL 663, 676 (1997) ("[I]t is dubious at best to exclude an economist's methodology under *Daubert* based upon its inconsistency with the current state of the *law.* The principal reason to permit any expert to testify is to permit the law to evolve in light of the changing state of knowledge. This is nowhere more evident than in the law of antitrust, which has taken great strides in light of evolving economic principles. The law of antitrust simply could not evolve to reflect the changing state of economic knowledge if the mere existence of contrary legal precedent could be cited to bar testimony under *Daubert.* Such an approach is seriously at odds with the Federal Rules of Civil Procedure, 53 as well as the spirit and letter of *Daubert.* 54").

[243] In Re Cardizem CD Antitrust Litigation, 105 F. Supp. 2d 682, 694 (E.D. Mich. 2000)

[244] City of Tuscaloosa v. Altria Group, Inc., 158 F.3d 548, 567 n.27 (11th Cir. 1998).

framework for evaluating the lawfulness of the Defendants' conduct."[245]

III. COMPETITIVE EFFECTS AS LEGISLATIVE FACTS

Competitive effects may also assume the role of legislative facts (legislative competitive effects). Legislative facts may concern various aspects of the reality in which the law operates.[246] Sometimes they get classified according to the factual context to which they belong – for instance, McCormick lists social, economic, political, and scientific legislative facts.[247] Under this classification, competitive effects would obviously be a type of economic legislative facts. A fact counts as legislative when it is used to resolve a question of law, i.e. to determine the content of the legal rule applicable to the case at hand. Although this use of facts tends to receive less attention than the adjudicative one,[248] it is pervasive and its role in legal decision-making essential.[249]

A. Terminology

A terminological remark is in order here. While this article adheres to the original Davis's notion of "legislative fact," it needs to be appreciated that its reference to legislation may be misleading in two ways. First, the facts in question are worked with not only by legislatures but also by

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[245] Aventis Envtl. Sci. USA LP v. Scotts Co., 383 F.Supp. 2d 488, 516 (S.D.N.Y. 2005).

[246] Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINNESOTA LAW REVIEW 1, 19 n.50 (1988). The arguably most paradigmatic legislative facts are the effects exerted by (antitrust) law on the behavior of its addressees. *See* Ann Woolhandler, *Rethinking the Judicial Reception of Legislative Facts*, 41 VANDERBILT LAW REVIEW 111, 114 (1988) ("A paradigmatic legislative fact is one that shows the general effect a legal rule will have …."). While such effects may also be determined with the help of economics, *see* Jan Broulík, *Two Contexts for Economics in Competition Law: Deterrence Effects and Competitive Effects*, *in* NEW DEVELOPMENTS IN COMPETITION LAW AND ECONOMICS, 30-34 (Klaus Mathis & Avishalom Tor eds., 2019), they are not considered by this article.

[247] MCCORMICK ON EVIDENCE §328 595 (Kenneth S. Broun ed., 7th ed. 2013); *see also* Bryan L. Adamson, *Federal Rule of Civil Procedure 52(a) as an Ideological Weapon*, 34 FLORIDA STATE UNIVERSITY LAW REVIEW 1025, 1054 (2007) ("Legislative facts themselves have been subcategorized into types: sociological, scientific, political, historical (as a branch of knowledge), economic, or law-legislative.").

[248] *Cf.* Todd S. Aagaard, *Factual Premises of Statutory Interpretation in Agency Review Cases*, 77 GEORGE WASHINGTON LAW REVIEW 366, 382 (2009) ("Typically, where reference is made to the relevant 'facts of a case,' what springs to mind is adjudicative facts – the facts of the particular case to which the law is applied to decide the case."); Stephen Gageler, *Fact and Law*, 11 NEWCASTLE LAW REVIEW 1, 12, 17, 23 (2008-2009) (observing that the Australian legal system calls adjudicative facts "ordinary" facts).

[249] *See* Brianne J. Gorod, *The Adversarial Myth: Appellate Court Extra-Record Factfinding*, 61 DUKE LAW JOURNAL 1, 39 (2011) (arguing that the legislative kind of fact "is no less important – and, in fact, is arguably more important – to the courts' resolution of many legal disputes" than the adjudicative kind); *id.* at 40 ("[W]hen [legislative] facts do play a role, they are often critical.").

administrative agencies and courts[250] – indeed, this article focuses on the use of legislative facts in the context of law application.[251] Second, as elaborated in the following section, these facts are used not only to make new law but also to interpret existing rules. Alternative designations have been suggested in order to prevent possible misunderstandings – Keeton, for instance, proposed to use the term "premise facts" or "issue-of-law facts."[252] In our view, nevertheless, for the sake of consistency, it seems preferable to adhere to the traditional Davis' terminology.[253]

Furthermore, case-law and scholarship have used the phrase "legislative facts" also for other types of facts than the one considered here.[254] One of them concerns "facts which govern the process by which a judge or jury decides cases."[255] These facts – often discussed under the

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[250] *See* Stephen Gageler, *Fact and Law*, 11 NEWCASTLE LAW REVIEW 1, 22 (2008-2009) (observing that in the context of the judiciary the term legislative fact refers to "a court acting as a legislator"); Brianne J. Gorod, *The Adversarial Myth: Appellate Court Extra-Record Factfinding*, 61 DUKE LAW JOURNAL 1, 39 (2011) (cautioning that legislative facts are "[n]ot to be confused with facts found by a legislature"); Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINNESOTA LAW REVIEW 1, 8 n.21 (1988) (noting that "the phrase *legislative facts* often is used with a very broad meaning that extends at least to facts used in lawmaking by courts and other entities as well as lawmaking by legislatures"); Brenda C. See, *Written in Stone? The Record on Appeal and the Decision-Making Process*, 40 GONZAGA LAW REVIEW 157, 191 (2004) (noting that legislative facts "concern matters which relate to what is known as the 'legislative' function of the court"); *cf.* 3 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE 160 (2d ed. 1980) (maintaining that "the main lawmakers are of three kinds – legislators, judges and administrators")

[251] *Supra* footnotes 50 – 51 and accompanying text.

[252] Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINNESOTA LAW REVIEW 1, 8 n.20 (1988); *see also* Suzanna Sherry, *Foundational Facts and Doctrinal Change*, UNIVERSITY OF ILLINOIS LAW REVIEW 145 (2011).

[253] *See* DAVID L. FAIGMAN, CONSTITUTIONAL FICTIONS: A UNIFIED THEORY OF CONSTITUTIONAL FACTS 46 (2008) ("Davis's dichotomy . . . has become the established vocabulary for describing the kinds of facts that are relevant to legal discourse."); *accord* Brianne J. Gorod, *The Adversarial Myth: Appellate Court Extra-Record Factfinding*, 61 DUKE LAW JOURNAL 1, 140 n.70 (2011); Allison Orr Larsen, *Confronting Supreme Court Fact Finding*, 98 VIRGINIA LAW REVIEW 1255, 1256 n.5 (2012).

[254] This is due to legislative facts being sometimes understood as a residual category, containing all facts that do not satisfy a given definition of adjudicative facts. *See, e.g.*, 3 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE §15.3 143 (2d ed. 1980) ("The distinction between adjudicative and legislative facts should be essentially one between facts about particular immediate parties and all other facts . . . ."); A. J. Stephani, *Therapeutic Jurisprudence in the Appellate Arena: Judicial Notice and the Potential of the Legislative Fact Remand*, 24 SEATTLE UNIVERSITY LAW REVIEW 509, 518 (2000) (defining legislative facts as "facts that are used for all other purposes" than adjudicative facts).

[255] Bryan L. Adamson, *Federal Rule of Civil Procedure 52(a) as an Ideological Weapon*, 34 FLORIDA STATE UNIVERSITY LAW REVIEW 1025, 1059 (2007); *see also* A. J. Stephani, *Therapeutic Jurisprudence in the Appellate Arena: Judicial Notice and the Potential of the Legislative Fact Remand*, 24 SEATTLE UNIVERSITY LAW REVIEW 509, 518-19 (2000).

rubric of "non-evidence" facts – represent the background knowledge and beliefs held by members of the tribunal, that is for instance judges or jurors.[256] Another type of facts is used "to set forth an epistemological framework"[257] within which to view the particular subject matter of the case. These facts include the above discussed major factual premises from which one may infer facts of the particular case.[258] The current article nevertheless discusses only facts used to determine the applicable legal rule, also known as "pure" legislative facts.[259]

B. Question of Law – Interpretation and Making of Law

As mentioned, legislative facts are facts used to resolve questions of law.[260] Resolving a question of law means determining the content of the rule to be applied. There are two types of such determinations. The first one consists in ascertaining the content of an already existing piece of – statutory, common or other – law, which is known as legal interpretation.[261] The second possibility is that the adjudicating body makes a new rule. This new rule may govern a type of cases that have so far been unregulated – i.e. "fill in a gap" – or it may replace an older rule. It needs to be added, nevertheless, that the line between interpreting and

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[256] *See generally* Richard M. Fraher, *Adjudicative Facts, Non-Evidence Facts, and Permissible Jury Background Information*, 62 INDIANA LAW JOURNAL 333 (1987); CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, EVIDENCE §2.4 72-76 (4th ed. 2009).

[257] A. J. Stephani, *Therapeutic Jurisprudence in the Appellate Arena: Judicial Notice and the Potential of the Legislative Fact Remand*, 24 SEATTLE UNIVERSITY LAW REVIEW 509, 519 (2000); *see also* Bryan L. Adamson, *Federal Rule of Civil Procedure 52(a) as an Ideological Weapon*, 34 FLORIDA STATE UNIVERSITY LAW REVIEW 1025, 1060 (2007); Bryan L. Adamson, *Critical Error: Courts' Refusal To Recognize Intentional Race Discrimination Findings as Constitutional Facts*, 28 YALE LAW AND POLICY REVIEW 1, 14-15 (2009).

[258] *Supra* section II.C.2.

[259] *See* A. J. Stephani, *Therapeutic Jurisprudence in the Appellate Arena: Judicial Notice and the Potential of the Legislative Fact Remand*, 24 SEATTLE UNIVERSITY LAW REVIEW 509, 519 (2000).

[260] *See supra* notes 45 and 117 and accompanying text; *see also* Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINNESOTA LAW REVIEW 1, 11 (1988) (defining legislative facts as "facts that serve as premises for deciding an issue of law"). The literature also often invokes the language of "policy" in this context. *See, e.g.*, Allison Orr Larsen, *Confronting Supreme Court Fact Finding*, 98 VIRGINIA LAW REVIEW 1255, 1265 (2012) ("Legislative facts . . . help the court decide questions of law and policy."); MARTIN A. SCHWARTZ, SECTION 1983 LITIGATION: FEDERAL EVIDENCE 5.05 (5th ed. Supp ed. 2018) ("Courts involved in constitutional issues, statutory interpretation, and other policy matters may rely upon legislative facts."); Elizabeth G. Thornburg, *The Curious Appellate Judge: Ethical Limits on Independent Research*, 28 THE REVIEW OF LITIGATION 131, 136 (2008) (defining legislative facts as "those that inform the court's judgment when deciding questions of law or policy"); see also *supra* note 8 and accompanying text.

[261] *See, e.g.*, Mark Greenberg, *What Makes a Method of Legal Interpretation Correct? Legal Standards vs. Fundamental Determinants*, 130 HARVARD LAW REVIEW FORUM 105, 110 (2017).

making the law is often hard or outright impossible to discern, and that some writers challenge its very existence. This controversy does, nevertheless, not undermine the concept of a legislative fact. A fact used to resolve a question of law is legislative regardless of whether the resolution entails ascertainment of an existing rule or fashioning of a new one.[262]

Facts are relevant to law-interpretation and law-making when the law aims to achieve a certain goal in the real world. The factual information is then used to determine a legal rule that is conducive to this goal.[263] As

[262] Menora v. Ill. High Sch. Ass'n, 683 F.2d 1030, 1036 (7th Cir. 1982) ("Legislative facts are those general considerations that move a lawmaking or rulemaking body to adopt a rule."); Heck v. Reed, 529 N.W.2d 155, 163 (N.D. 1995) ("A court may take judicial notice of legislative facts when interpreting a statute, particularly when the statute is grounded in public policy."); Todd S. Aagaard, *Factual Premises of Statutory Interpretation in Agency Review Cases*, 77 GEORGE WASHINGTON LAW REVIEW 366, 388 (2009) (considering legislative facts "a critical component of statutory interpretation"); Lewis W. Beilin, *In Defense of Wisconsin's Judicial Notice Rule*, WISCONSIN LAW REVIEW 499, 514 (2003) (defining legislative facts as "facts necessary for interpreting the meaning of laws"); MCCORMICK ON EVIDENCE §328 595 (Kenneth S. Broun ed., 7th ed. 2013) ("Judicial notice of [legislative] facts occurs when a judge is faced with the task of creating law, by deciding upon the constitutional validity of a statute, or the interpretation of a statute, or the extension or restriction of a common law rule, upon grounds of policy, and the policy is thought to hinge upon social, economic, political or scientific facts." (footnotes omitted)); David L. Faigman, et al., *Using the Structure of Scientific Research to Distinguish between Admissibility and Weight in Expert Testimony*, 110 NORTHWESTERN UNIVERSITY LAW REVIEW 859, 885-86 (2016) ("Legislative facts are facts that have relevance to legal reasoning and the fashioning of legal rules."); Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINNESOTA LAW REVIEW 1, 9 n.22 (1988) (noting that "facts that serve as premises for enactment of statutes serve a function similar to that of facts that serve as premises for judicial decisions, including . . . those regarding . . . interpretation of legislation"); *id.* at 11 (observing that legislative facts "include not only . . . facts that a court decides when making new law or overruling precedent, but also facts decided as a premise for a reasoned decision applying settled law"); 1 CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, FEDERAL EVIDENCE §58 288 (2d ed. 1994) (observing that legislative facts are used by "courts to interpret constitutions, statutes, or regulations or to create or modify rules of common law"); Paul R. Rice, *The Evidence Project: Proposed Revisions to the Federal Rules of Evidence*, 171 FEDERAL RULES DECISIONS 330, 385 (1997) (proposing that legislative facts be defined as facts "necessary to interpret the scope and meaning of the law"); Brenda C. See, *Written in Stone? The Record on Appeal and the Decision-Making Process*, 40 GONZAGA LAW REVIEW 157, 191 (2004) (" 'Legislative' facts concern matters which relate to what is known as the 'legislative' function of the court, where the court is in essence 'making law' either by filling a gap in the common law by formulating a rule, construing a statute, or framing a constitutional rule."); 21B CHARLES ALAN WRIGHT & KENNETH W. GRAHAM, JR., FEDERAL PRACTICE AND PROCEDURE: FEDERAL RULES OF EVIDENCE: RULES 201 TO 400 §5103.2 129-130 (2d ed. 2005) ("Federal courts also notice 'legislative facts' when construing statutes . . . ."); *id.* at §5103.2 130 (noting that " 'legislative facts' will be noticed when exercising common law or delegated rulemaking authority").

[263] *See* Richard B. Cappalli, *Bringing Internet Information to Court: Of "Legislative Facts"*, 75 TEMPLE LAW REVIEW 99, 106 (2002) ("[J]udges want their rules to operate

regards interpretation, legislative facts will hence find use primarily in purposive interpretation: If a piece of law allows several possible interpretations and its purpose is for instance to deter as much competitive harm as possible (while bringing about as little cost as possible), the interpretation ought to be selected that furthers this purpose the most. The interpreter needs to possess factual information – including information about the competitive effects of the conduct governed by the law – in order to be able to select such an interpretation. Similarly, when a new antitrust rule is to be designed that pursues the said purpose, the same facts come into play. In other words, the use of facts in interpretation and making of law are two sides of the same coin.

C. Effects of a Class of Business Conduct

It was discussed above that adjudicative competitive effects are effects brought about by a particular instance of business conduct.[264] Legislative competitive effects, in contrast, concern an entire conduct *class*.[265] That is to say that they are general rather than specific.[266] This follows from the generality of law – each antitrust rule provides for a category of business conduct. Legislative competitive effects are then

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to society's benefit, and they are more likely to create beneficial law if they are fully informed about the relevant social setting."); Brianne J. Gorod, *The Adversarial Myth: Appellate Court Extra-Record Factfinding*, 61 DUKE LAW JOURNAL 1, 41-42 (2011) (arguing that "[t]he establishment of any legal rule requires some understanding of the world in which that legal rule will operate"); Michael J. Saks, *Judicial Attention to the Way the World Works*, 75 IOWA LAW REVIEW 1011, 1015 (1990) ("When judges are in a rule-making mode, ... not only do judges take into account knowledge of the way the world works, they are unable to do otherwise."); *cf.* MCCORMICK ON EVIDENCE §331 610-11 (Kenneth S. Broun ed., 7th ed. 2013) ("It is conventional wisdom today to observe that judges not only are charged with to find what the law is, but must regularly make new law . . . . The very nature of the judicial process necessitates that judges be guided, as legislators are, by considerations of expediency and public policy. They must, in the nature of things, act either upon knowledge already possessed or upon assumptions, or upon investigation of the pertinent general facts, social, economic, political, or scientific. An older tradition once prescribed that judges should rationalize their result solely in terms of analogy to old doctrines, leaving considerations of expediency unstated. Contemporary practice indicates that judges in their opinions should render explicit their policy judgments and the factual grounds therefor.").

[264] *Supra* part II.A.

[265] *See* Michael Evan Gold, *Levels of Abstraction in Legal Thinking*, 42 SOUTHERN ILLINOIS UNIVERSITY LAW JOURNAL 117, 127 (2018) ("A legislative fact is a fact that is generally true of many persons and transactions. . . . In contrast, an adjudicative fact is a fact that need be true only of specific persons and transactions; whether it is true of any other persons or transactions is irrelevant."); *cf.* Paul R. Rice, *The Evidence Project: Proposed Revisions to the Federal Rules of Evidence*, 171 FEDERAL RULES DECISIONS 330, 391 (1997) (observing that "legislative facts do not deal with a particular course of events which the parties are attempting to reconstruct").

[266] *See* Michael Evan Gold, *Levels of Abstraction in Legal Thinking*, 42 SOUTHERN ILLINOIS UNIVERSITY LAW JOURNAL 117, 119 (2018) (maintaining that "[l]evel of abstraction refers to the numbers of persons and transactions that generate an issue").

effects produced by such a category.[267]

1. Distribution of Effects

Competitive effects of a class of business conduct are described by their *distribution*.[268] Ideally, one would know a detailed distribution of the effects' actual magnitudes across the entire spectrum from the most harmful to the most beneficial ones. There can nevertheless also be less complete information about the effects of the class. At the very least, one may know whether there are any harmful or benign instances at all. It can for instance be a fact that all instances of some market conduct have adverse competitive effects or that none of them does. It will nevertheless usually be the case that the class contains both.[269] In that case, we may endeavor to find out – or rather estimate – the mean (average) of the distribution. The focus is then usually on the question whether the effects of the class are on average adverse or not.

A distribution of competitive effects can also be described in relative terms. One possibility is to know the relative frequencies of harmful and benign instances of competitive effects produced by the given conduct class.[270] It could for instance be the case that one third of resale price maintenance agreements harms competition while the other two thirds do not.[271] In addition, the distribution may be further described as regards the relative magnitudes of the effects.[272] For instance, benign instances may be known to occur three times less likely than the harmful ones, but with the pro-competitive effects of benign conduct being on average five times

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[267] *Cf.* Ioannis Lianos, *Categorical Thinking in Competition Law and the 'Effects-based' Approach in Article 82 EC*, *in* ARTICLE 82 EC: REFLECTIONS ON ITS RECENT EVOLUTION 19, 20 (Ariel Ezrachi ed., 2009) (distinguishing between "an evaluation *in abstracto* of the effect of a specific *category* of commercial practices" and a concrete analysis of the effects of a specific commercial practice).

[268] *Cf.* Arndt Christiansen & Wolfgang Kerber, *Competition Policy with Optimally Differentiated Rules Instead of "Per se Rules vs Rule of Reason"*, 2 JOURNAL OF COMPETITION LAW AND ECONOMICS 215, 229-31 (2006) (discussing the "frequency distribution of the welfare effects of the controlled business behavior").

[269] *See, e.g.*, William H. Page, *The Chicago School and the Evolution of Antitrust: Characterization, Antitrust Injury, and Evidentiary Sufficiency*, 75 VIRGINIA LAW REVIEW 1221, 1240 (1989) ("[A]t the level of rulemaking, in which practices must be described in categorical terms, the models only rarely result in such clear-cut answers.").

[270] *Cf.* Keith N. Hylton & Michael Salinger, *Tying Law and Policy: A Decision-Theoretic Approach*, 69 ANTITRUST LAW JOURNAL 469, 470 (2001) ("stressing the importance of the relative frequencies of pro- and anticompetitive conduct in such an analysis").

[271] *Cf.* Yannis Katsoulacos & David Ulph, *On Optimal Legal Standards for Competition Policy: A General Welfare-Based Analysis*, 57 JOURNAL OF INDUSTRIAL ECONOMICS 410, 413 (2009) (calling the share of harmful instances the "base-rate probability of anticompetitive harm").

[272] *Cf.* John Vickers, *Competition Law and Economics: A Mid-Atlantic Viewpoint*, 3 EUROPEAN COMPETITION JOURNAL 1, 10 (2007) ("Decision theory implies that it is not just the relative frequency of pro- and anti-competitive consequences that matters to the assessment of a per se rule, but the severity of resulting harm in either case.").

larger than the anti-competitive effects of harmful conduct. Any such information about competitive effects can play the role of a legislative fact.

2. Ascertainment of the Distribution

Theoretically speaking, there are two different ways to obtain information about how competitive effects of a conduct class are distributed. First, one can start from identifying effects exerted by individual instances of the class.[273] For instance, after finding one instance that does and another that does not harm competition, it is possible to conclude that the distribution spans anti- as well as pro-competitive effects. Knowledge about effects of individual instances can nevertheless also be used to infer a more complete picture of the distribution. One could namely select a random sample of this class and then generalize the results over the whole class. Second, it is possible to rely directly on models. A model can for example reveal that, the given type of conduct may – depending on the conditions – produce harmful as well as benign effects. Models may nevertheless also be used to predict the entire distribution of competitive effects exerted by a conduct class. The model would then be a simulation working with parameters that would themselves be described by distributions rather than by particular values.

Information necessary for discerning the distribution of competitive effects with sufficient accuracy is unfortunately rarely available.[274] As pointed out by Salinger, "there is no practical way to take a random sample of instances of a particular practice like tying or bundled discounts and assess the relative frequency of pro-competitive and anticompetitive instances."[275] The same can be said also about establishing the distributions of model parameters. More research into these issues is necessary. Until it is available, one needs to work with the best available estimates.[276]

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[273] *Supra* Part II.C.

[274] Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877 (2007) (Breyer, J., dissenting); Kai Hüschelrath & Sebastian Peyer, *Public and Private Enforcement of Competition Law: A Differentiated Approach*, 36 WORLD COMPETITION 585, 596 (2013); Michael Salinger, *Section 2 Symposium: Michael Salinger on Framing the Debate*, TRUTH ON THE MARKET (May 4, 2009), https://truthonthemarket.com/2009/05/04/section-2-symposium-michael-salinger-on-framing-the-debate/.

[275] Michael A. Salinger, Dir., Bureau of Econ., Fed. Trade Comm'n, Comments for ABA Section of Antitrust Law: Looking for the Keys under the Lamppost: Insights from Economics into Standards for Unilateral Conduct, 2 (July 24, 2006) (transcript available at www.ftc.gov/public-statements/2006/07/looking-keys-under-lamppost-insights-economics-standards-unilateral).

[276] *Id.*

D. Competitive Effects and Optimal Rules

Information about the distribution of competitive effects constitutes an important input into the determination of optimal antitrust rules. An optimal rule is the one from all the available rules that achieves the goal of the law to the greatest extent.[277] The goal of antitrust is to prevent as much competitive harm with as little cost as possible, whereas a major type of cost is the negative side-effect consisting in prevention of business conduct with benign competitive effects. The extent of non-prevented anti-competitive effects (underdeterrence) and prevented pro-competitive effects (overdeterrence) depends on – among other things – how often the business conduct gets falsely acquitted or convicted and on the magnitude of its effects.[278] Knowledge of how competitive effects are distributed across the conduct class in question is hence indispensable for the determination of an optimal rule.[279]

With an optimal rule being optimal for the *given class* of conduct, the notion of a class and its delimitation requires particular notice. Interpretation usually works with a class predefined by the rule at stake.[280] Making of law nevertheless does not need to work with any predefined categories. To the contrary, a substantial contribution of economic analysis consists in development of new categorizations that may be used to specify which conduct is lawful and which is not.[281] Christiansen and

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[277] This determination tends to be framed as an exercise in minimization of costs associated with the rules. *But see* Jonathan B. Baker, *Taking the Error Out of Error Cost Analysis: What's Wrong with Antitrust's Right*, 80 ANTITRUST LAW JOURNAL 1, 7 n.24 (2015) ("Although the 'error cost' analysis is conducted in terms of costs, minimizing total social costs is equivalent to maximizing total social benefits, which is more likely how the analysis would be described in the language of decision theory.").

[278] For a discussion of the relationship between enforcement errors and antitrust deterrence and for an overview of the literature, see Jan Broulík, *Preventing Anticompetitive Conduct Directly and Indirectly: Accuracy Versus Predictability*, 64 ANTITRUST BULLETIN 115, 121-22 (2019).

[279] *See, e.g.*, William H. Page, *The Chicago School and the Evolution of Antitrust: Characterization, Antitrust Injury, and Evidentiary Sufficiency*, 75 VIRGINIA LAW REVIEW 1221, 1240 (1989) (arguing that determination of an optimal antitrust rule needs to take into account "the magnitude of the welfare effects of the practice").

[280] Unless what needs to be interpreted is the actual scope of the rule. In that case the discussion on law making applies *mutatis mutandis*.

[281] *Cf.* Thomas G. Krattenmaker & Steven C. Salop, *Raising Rivals' Costs to Achieve Power over Price*, 96 YALE LAW JOURNAL 209, 253 (1986) ("Nevertheless, clearer standards than those set out above are available. They can be developed by adopting objective measures for estimating the likelihood and magnitude of anticompetitive effects. This process requires identifying the key factors of market structure and firm behavior that are conducive to successful exclusionary strategies and objective standards to measure the extent to which such factors are present in specific cases."); John E. Lopatka & William H. Page, *Economic Authority and the Limits of Expertise in Antitrust Cases*, 90 CORNELL LAW REVIEW 617, 639 (2005) ("We are now in a position to discuss how courts make use of economic authority in formulating and applying antitrust rules. The implications of a theory allow courts to predict that a practice will have monopolistic effects in specified circumstances. Using these predictions, the courts can identify the sorts of factual inquiries necessary to determine

Kerber in this context speak about the "separation effectiveness" of additional assessment criteria as a reduction in false acquittals and convictions following from their introduction.[282] The new categorizations will then obviously pay attention also to distributions of competitive effects[283] – ideally the new categorization will lead to isolation of a category with a very little or very large share of harmful effects. For example, instances of a practice that exhibit a certain feature that makes harm unlikely – e.g. being adopted by a business with market share below a certain threshold – could be per se allowed while the rest could fall under the rule of reason.[284] A crucial requirement is then that the feature in question need be easily discernible by adjudicators as well as by antitrust's addressees.

This discussion reveals that determination of an optimal rule needs to be based on information about competitive effects of not only the conduct class ultimately governed by the rule but also of adjacent classes. Imagine, for instance, that one wants to create a safe harbor – i.e. a permissive per se rule – for vertical agreements that are unlikely to harm competition. One possibility is to adopt a rule that makes lawful all vertical agreements concluded by businesses whose market share does not exceed a specified threshold except for those agreements that include a black-listed provision.[285] To put together the black list, it is clearly necessary to be informed about competitive effects of agreements that do not end up enjoying the benefit of the safe harbor. In other words, legislative

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whether liability is appropriate. Courts must then formulate rules that define the factual issues on which the outcome of the case depends."); *id.* at 698 ("Where economic authority is most robust, it can foreclose factual inquiries and identify the preconditions for anticompetitive effects. Thus, economic authority can be used to formulate subsidiary rules that focus factual inquiry on indicia that the practice is efficient or inefficient."); William H. Page, *The Chicago School and the Evolution of Antitrust: Characterization, Antitrust Injury, and Evidentiary Sufficiency*, 75 VIRGINIA LAW REVIEW 1221, 1242 (1989) ("They then compare different formulations of a rule tailored to the kinds of evidence that correlate with the monopolistic explanation, asking . . . what is the likely magnitude and frequency of the monopolistic explanation among practices with the defined features . . . .").

[282] Arndt Christiansen & Wolfgang Kerber, *Competition Policy with Optimally Differentiated Rules Instead of "Per se Rules vs Rule of Reason"*, 2 JOURNAL OF COMPETITION LAW AND ECONOMICS 215, 230 (2006).

[283] *See, e.g.*, Thomas G. Krattenmaker & Steven C. Salop, *Raising Rivals' Costs to Achieve Power over Price*, 96 YALE LAW JOURNAL 209, 253 (1986) (arguing that designing of optimal antitrust rules on exclusionary practices "requires identifying the key factors of market structure and firm behavior that are conducive to successful exclusionary strategies").

[284] *Cf.* David S. Evans, *How Economists Can Help Courts Design Competition Rules: An EU and US Perspective*, 28 WORLD COMPETITION 93, 97 (2005) ("For example, the predatory pricing test in the United States can be thought of as a set of sufficient conditions for delineating the circumstances in which aggressive price-cutting is anti-competitive.").

[285] This is the approach of the EU Block Exemption Regulation for vertical agreements.

competitive effects are not necessarily the competitive effects of the conduct governed by the antitrust rule to be applied in the case at hand; they may concern also effects exerted by related conduct.

E. Implications for Economics

It follows from the discussion of legislative competitive effects that their determination with the help of economics is – like determination of adjudicative competitive effects – subject to substantive as well as legal relevance. The specific content of these criteria is nevertheless somewhat different. Substantive relevance takes the shape of helpfulness to search for an optimal antitrust rule. Legal relevance then has to do with whether the adjudicators may take competitive effects into account when deciding on the question of law at stake.

1. Relevance to Rule-Optimization

It will make sense to carry out a certain economics-based inquiry into competitive effects for the purposes of answering a question of law only in so far as this inquiry will actually contribute to finding the optimal rule. This will however not be the case with regard to the so-called "never-fallacy." This term was introduced by Easterbrook to denote a line of reasoning according to which a category of business conduct can only be subjected to a per se permissive rule if it includes *no* harmful instances, i.e. if the rule produces no false acquittals.[286] The same logic nevertheless applies also in the opposite direction. It is not true that a per se prohibition of a certain conduct category is optimal only as long as this category includes *no* benign instances, i.e. as long as the rule produces no false convictions. To put it the other way around, the fact that the category includes *some* benign instances does not on its own imply that the optimal rule is the rule of reason. Many commentators nevertheless do apply this false logic.[287] Consider for instance Padilla's remark on resale-price

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[286] Frank H. Easterbrook, *Ignorance and Antitrust*, *in* ANTITRUST, INNOVATION, AND COMPETITIVENESS 119, 129 (Thomas M. Jorde & David J. Teece eds., 1992) ("[W]e must jettison the 'never' fallacy. Judges and scholars often say that unless a practice is 'never' inefficient, 'never' costly to consumers, juries must determine whether it was deleterious in the case at hand.").

[287] *See* Matthew Bennett, et al., *Resale Price Maintenance: Explaining the Controversy, and Small Steps Towards a More Nuanced Policy*, *in* INTERNATIONAL ANTITRUST LAW & POLICY: FORDHAM CORPORATE LAW INSTITUTE CONFERENCE 2009 497, 504 (Barry E. Hawk ed., 2010) (observing that some economists cannot stomach the fact that practices without an anticompetitive effect are presumed unlawful); Justus Haucap, *Bounded Rationality and Competition Policy*, *in* COMPETITION POLICY AND THE ECONOMIC APPROACH: FOUNDATIONS AND LIMITATIONS 217, 220 (Josef Drexl, et al. eds., 2011) ("[M]any contributions in the industrial organization literature, and in economics journals more generally, conclude that a rule of reason is almost always warranted, as soon as a model succeeds in demonstrating that some business practice can have either positive or negative welfare effects, depending on modeling assumptions and/or parameter values."); MICHAEL DENNIS WHINSTON, LECTURES ON ANTITRUST ECONOMICS 19 (2006) ("In the economics literature, it is common for a journal article

maintenance (RPM) agreements: "[T]here is evidence that RPM agreements may be procompetitive while others may facilitate collusion. As a matter of economics, therefore, RPM agreements should be treated on a case-by-case basis using an effects-based approach."[288] The flaw of this logic has been indicated also by Justice Breyer, whose dissent in *Leegin* argues that a choice of the rule of reason over a per se prohibition cannot be based just on the fact that the distribution of the conduct in question includes both harmful and beneficial instances; one also needs to know, he specifies, "how often … harms or benefits [are] likely to occur."[289]

The logic underlying the never-fallacy is false because the distribution of competitive effects is not the only fact to be taken into account in determination of an optimal rule. There are at least two other sets of relevant considerations. First, since antitrust law prevents competitive harm much more often indirectly through discouraging potential violations rather than directly by stopping actual instances of harmful conduct,[290] it does also matter how well businesses can predict whether their conduct will be sanctioned or not.[291] Second, operation of antitrust entails spending of resources on the part of enforcers as well as businesses – by the former on detection, the latter on compliance, and both on actual cases;[292] these enforcement costs also need to be considered. As it happens, predictability tends to be higher[293] and enforcement costs lower[294] for per se rules anticipating a limited factual inquiry than for the

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that shows that a particular practice could either raise or lower welfare to conclude that this implies that the practice should be accorded a rule of reason standard. As the foregoing discussion suggests, such a conclusion makes little sense.").

[288] Jorge Padilla, *The Role of Economics in EU Competition Law: From Monti's Reform to the State Aid Modernization Package* 7 (Sept. 28, 2015) (unpublished working paper), *available at* https://ssrn.com/abstract=2666591 (footnotes omitted).

[289] Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877 (2007) (Breyer, J., dissenting).

[290] *See, e.g.*, Stephen Davies, et al., *Quantifying the Deterrent Effect of Anticartel Enforcement*, 56 ECONOMIC INQUIRY 1933 (2018); Deloitte, *The Deterrent Effect of Competition Enforcement by the OFT* (2007), *avaliable at* http://webarchive.nationalarchives.gov.uk/20140402141250/http:/www.oft.gov.uk/shared_oft/reports/Evaluating-OFTs-work/oft962.pdf.

[291] Jan Broulík, *Preventing Anticompetitive Conduct Directly and Indirectly: Accuracy Versus Predictability*, 64 ANTITRUST BULLETIN 115, 125-27 (2019).

[292] For an overview of the literature, see *id.* at 117 n.7&8.

[293] *E.g.* Frank H. Easterbrook, *Vertical Arrangements and the Rule of Reason*, 53 ANTITRUST LAW JOURNAL 135, 155 (1984) ("When everything is relevant, nothing is dispositive. Any one factor might or might not outweigh another, or all of the others, in the factfinder's contemplation. The formulation offers *no help to businesses planning their conduct*." (emphasis added))

[294] *E.g.* Yannis Katsoulacos & David Ulph, *On Optimal Legal Standards for Competition Policy: A General Welfare-Based Analysis*, 57 JOURNAL OF INDUSTRIAL ECONOMICS 410, 419 (2009) ("There are costs involved in collecting and analysing the information needed to form the judgments necessary to implement a discriminating rule – costs that would not be incurred under a per se rule.").

rule of reason requiring a thorough assessment. That is why the optimal rule for the given conduct category may produce false acquittals or convictions, i.e. be under- or over-inclusive[295] as regards the competitive effects of the category.[296]

The notion of the never-fallacy reveals that economic research showing that a certain category of business conduct may include – an unspecified share of – harmful or benign instances have hardly any use in the determination of the optimal rule for that category. Especially the predictions of game theoretical models used by the Post-Chicago school of economic thinking have been seen as "case specific and highly dependent on the chosen parameters".[297] As lamented by Wright "for each form of business arrangement, there exist an endless number of theoretical models of its … welfare consequences, each with different policy implications."[298] However, what interpreters and makers of antitrust rules truly need is information about the competitive effects of the entire conduct class.[299]

2. Relevance to the Adjudicator's Power

The second limitation on whether it makes sense to advance competitive effects of a class of business conduct as an argument for lawfulness or unlawfulness of this class is whether the adjudicator may at all take this argument into account in determining the applicable rule. US antitrust is built on a framework of legislation characterized by very vague language. This vagueness has been understood as delegating to the courts the power to refine substantive antitrust rules.[300] The legislation sets

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[295] *See, e.g.*, Daniel A. Crane, *The Economics of Antitrust Enforcement*, *in* ANTITRUST LAW AND ECONOMICS 1, 10 (Keith N. Hylton ed., Second ed. 2010) ("Adjudicatory errors may occur in both directions – false positive and false negative – … at the liability rule-framing level (through underinclusion and overinclusion) ….").

[296] *See, e.g.*, Stephen Breyer, *Economic Reasoning and Judicial Review*, 119 ECONOMIC JOURNAL F123, F130 (2009) ("[C]ourts sometimes should apply rules of *per se* unlawfulness to business practices even when those practices sometimes produce economic benefits.").

[297] Patrice Bougette, et al., *When Economics Met Antitrust: The Second Chicago School and the Economization of Antitrust Law*, 16 ENTERPRISE AND SOCIETY 313, 315 (2015).

[298] Joshua D. Wright, *Abandoning Antitrust's Chicago Obsession: The Case for Evidence-based Antitrust*, 78 ANTITRUST LAW JOURNAL 241, 241 (2012).

[299] William H. Page, *The Chicago School and the Evolution of Antitrust: Characterization, Antitrust Injury, and Evidentiary Sufficiency*, 75 VIRGINIA LAW REVIEW 1221, 1242 (1989) ("[T]his approach necessarily relies not only on the models but on empirical estimates of … the magnitude of the welfare effects of antitrust practices ….").

[300] *See, e.g.*, Rebecca Haw, *Delay and Its Benefits for Judicial Rulemaking under Scientific Uncertainty*, 55 BOSTON COLLEGE LAW REVIEW 331, 347 (2014) ("Courts and commentators alike have interpreted this vagueness as a broad delegation of regulatory power to the courts to reduce the [Sherman] Act's broad language into applicable rules governing firm behavior."); Margharet H. Lemos, *The Other Delegate: Judicially Administered Statutes and the Nondelegation Doctrine*, 81 SOUTHERN CALIFORNIA LAW

general boundaries within which the rules are to be developed through the common-law method.[301] This method then takes into account relevant legislative facts, including information about competitive effects of the business conduct concerned. As this information is largely provided by economics and the economic understanding of the effects changes over time, the courts may adjust the rules accordingly.[302]

That is nevertheless not to say that legislative facts are considered within the course of every determination of the applicable antitrust rule.[303] If the law is clear, the adjudicator is generally supposed to follow it and, thus, has no need for legislative facts.[304] This obligation to stick to the existing law applies also with regard to statutory provisions that have been clarified by previous case law,[305] i.e. also case law interpreting antitrust

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REVIEW 405, 410 (2008) ("Sherman Act … delegates virtually boundless discretion to the federal courts to craft substantive antitrust rules …."); D. Daniel Sokol, *Rethinking the Efficiency of the Common Law*, 95 NOTRE DAME LAW REVIEW 795, 823 (2019) ("It is antitrust's enabling legislation that allows for common-law-like development.").

[301] *See, e.g.*, National Soc'y of Prof. Engineers v. United States, 435 U.S. 679, 688 (1978) ("Congress … did not intend the text of the Sherman Act to delineate the full meaning of the statute or its applications in concrete situations. The legislative history makes it perfectly clear that it expected the courts to give shape to the statutes broad mandate by drawing on common-law tradition." (footnote omitted)); Cal. Dental Ass'n v. FTC, 526 U.S. 756, 780 (1999) (referring to antitrust as a "quasi-common law realm"); Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 899 ("From the beginning the Court has treated the Sherman Act as a common-law statute."); William F. Baxter, *Separation of Powers, Prosecutorial Discretion, and the "Common Law" Nature of Antitrust Law*, 60 TEXAS LAW REVIEW 661, 663 (1982) ("Congress adopted what is in essence enabling legislation that has permitted a common-law refinement of antitrust law through an evolution guided by only the most general statutory directions."); Herbert Hovenkamp, *Antitrust Policy after Chicago*, 84 MICHIGAN LAW REVIEW 213, 214 n.7 (1985) ("[T]he 'common law' nature of antitrust refers to the power of the courts to devise specific rules that interpret a broadly worded statute.").

[302] *See, e.g.*, William F. Baxter, *Separation of Powers, Prosecutorial Discretion, and the "Common Law" Nature of Antitrust Law*, 60 TEXAS LAW REVIEW 661, 670 (1982) ("An adaptive approach to antitrust law is necessary … because of the continuing progress of economic theory in explaining … the competitive consequences of [firms'] behavior."); Rebecca Haw, *Delay and Its Benefits for Judicial Rulemaking under Scientific Uncertainty*, 55 BOSTON COLLEGE LAW REVIEW 331, 347 (2014) ("Economic beliefs about the efficiency of certain business practices, like the practices themselves, evolve over time. The [Sherman] Act needs to be flexible enough to adapt to these shifts in economics.").

[303] *See* 2 KENNETH CULP DAVIS, ADMINISTRATIVE LAW TREATISE 353 §15.03 (1958) ("In the great mass of cases decided by courts and by agencies, the legislative element is either absent or unimportant or interstitial, because in most cases the applicable law and policy have been previously established."); Brianne J. Gorod, *The Adversarial Myth: Appellate Court Extra-Record Factfinding*, 61 DUKE LAW JOURNAL 1, 40 (2011) ("[T]here will be many cases in which legislative facts play no role at all ….").

[304] *See, e.g.*, KENT GREENAWALT, REALMS OF LEGAL INTERPRETATION: CORE ELEMENTS AND CRITICAL VARIATIONS 54 (2018) ("If all that judges are doing is applying the terms of a will or statute that clearly dictates a particular result, we might say that interpretation is not really necessary.").

[305] *See, e.g.*, Edward H. Levi, *An Introduction to Legal Reasoning*, 15 UNIVERSITY

statutes. This case law is then to be followed not only by lower courts (vertical precedent) but also by the very court that earlier adopted the interpreting precedent (horizontal precedent, stare decisis).[306] Overruling of a precedent is warranted only in exceptional circumstances.[307]

It will therefore virtually never make sense to advance competitive effects of the practice at stake as a legislative fact. Let us return to the progeny of the *Leegin* case for illustration. At the time of its litigation before the district court and subsequently Fifth Circuit court, resale price maintenance agreements were governed by a rule prohibiting them per se.[308] It was therefore no surprise that when Leegin requested the district court to instruct the jury to apply the rule of reason the court instead issued an instruction according to which resale price maintenance agreements were per se unlawful. After the jury returned a verdict in favor of the plaintiff, Leegin renewed its motion for judgment as a matter of law and moved in the alternative for a new trial. The court denied Leegin's motions, stating that "[w]hether the per se classification of [RPM] agreements is wise is not for this court to decide." The Fifth Circuit affirmed the district court's decision, rejecting Leegin's request for rule-of-reason treatment because lower courts "remain bound by [the Supreme Court's] holding in *Dr. Miles*." To be sure, the Supreme Court ultimately took notice of the competitive effects of RPM agreements when overruling the per se prohibition set by *Dr. Miles*. Note, however, that this was the first time in almost a hundred years that competitive effects of agreements setting a minimum resale price were considered in a federal antitrust case as a legislative fact. In other words, (economics-based information about) legislative competitive effects will make a difference only in a tiny fraction of adjudicated cases.

OF CHICAGO LAW REVIEW 501, 505 (1984) ("In case law, when a judge determines what the controlling similarity between the present and prior case is, the case is decided. The judge does not feel free to ignore the results of a great number of cases which he cannot explain under a remade rule. And in interpreting legislation, when the prior interpretation, even though erroneous, is determined after a comparison of facts to cover the case, the case is decided.").

[306] William N. Eskridge, Jr., *Overruling Statutory Precedents*, 76 GEORGETOWN LAW JOURNAL 1361, 1361-62 (1988) (arguing that the courts will overrule their earlier interpretation of a statute only in exceptional cases); Lawrence M. Solan, *Precedent in Statutory Interpretation*, 94 NORTH CAROLINA LAW REVIEW 1165, 1171 (2016) ("[A] high court is unlikely to reverse itself once it has ruled on a question of statutory interpretation.").

[307] *See, e.g.*, Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 926 (2007) (Breyer, J dissenting); Rebecca Haw, *Delay and Its Benefits for Judicial Rulemaking under Scientific Uncertainty*, 55 BOSTON COLLEGE LAW REVIEW 331, 255 (2014); Daniel M. Tracer, *Stare Decisis in Antitrust: Continuity, Economics, and the Common Law Statute*, 12 DEPAUL BUSINESS AND COMMERCIAL LAW JOURNAL 1, 35-36 (2013) ("[O]verruling cases in the name of heightened economic understanding … might thus be reserved only for the most extreme cases in which there is virtual economic consensus that a prior rule is not merely non-ideal but, rather, that the older rule is demonstrably anticompetitive.").

[308] Dr. Miles Medical Co. v. John D. Park and Sons, 220 U.S. 373 (1911).

IV. CONCLUSION

Positive economics may play two distinct roles in antitrust proceedings: It may be used to ascertain facts of the antitrust case at hand (adjudicative facts) or facts used to determine the rule to be applied to the adjudicative facts (legislative facts). This article has focused on competitive employed as both adjudicative and legislative facts. The analysis has shown that economic inquiries into each will prove helpful only in so far as these inquiries are substantively as well as legally relevant (see table).

	Competitive effects as adjudicative facts	**Competitive effects as legislative facts**
Substantive relevance	Effects of the particular instance of conduct at bar	Effects of the class of conduct (to be) governed by the applicable rule and/or of adjacent classes
Legal relevance	Effects material under the applicable rule	Effects of a class not governed by a clear rule to be applied by the adjudicator

As regards substantive relevance, information provided by economics about competitive effects needs to be of use for the given exercise. When competitive effects are to be used as adjudicative facts, the provided information needs to concern the specific effects produced by the particular instance of conduct under scrutiny. That is to say that the economic inquiry needs to sufficiently account for the specific features of the conduct and of the environment in which it has taken place. In contrast, substantively relevant information on competitive effects as legislative facts will concern effects of an entire class of conduct. This information moreover needs to describe the effects' distribution to a sufficient extent, instead of merely stating that the class includes – or even only theoretically may include – at least some pro-competitive, respectively anti-competitive instances. While substantively relevant adjudicative and legislative competitive effects hence differ as to their generality,[309] they both need to have a direct logical connection to the ultimate object of the analysis, i.e. the conduct at hand and the applicable

[309] *See* Robert E. Keeton, *Legislative Facts and Similar Things: Deciding Disputed Premise Facts*, 73 MINNESOTA LAW REVIEW 1, 19 n.50 (1988) ("The distinction between facts about the particular case and facts about the state of the world is an underlying theme of the contrast between adjudicative and premise facts. Adjudicative facts are material specifically to the case at hand (case facts or discrete facts) and, in contrast, premise facts bear on the determination of what legal rule courts should apply to a specific case and other like cases generally (general facts).").

rule.

The notion of legal relevance refers to the fact that the law imposes restrictions on what adjudicators may take into account when deciding cases. That is to say that even if information about competitive effects would be substantively relevant, it may still be rendered irrelevant by the law itself. More particularly, competitive effects may be taken into account as adjudicative fact only if the applicable rule associates lawfulness of conduct with the latter's effects. This is the case for the rule of reason test but not for per se rules. As for the use of competitive effects as legislative facts, the information will be relevant only if the adjudicator is not supposed to simply follow a pre-existing clear rule but may instead interpret or create the applicable rule. It will typically be the case that lower courts will be expected to simply apply antitrust rules as these have been refined over the decades, whereas only higher courts may enjoy some leeway in this regard. The relevance of economic analyses of competitive effects to be used as adjudicative as well as legislative facts is thus clearly constrained by the legal system.

The discussion on the use of information about competitive effects in antitrust decision-making illustrates a broader point about the antitrust role of economics. It is generally accepted that economics should be used more in the design of rules rather than in case-specific assessments. If we see the rule of reason as the default test of lawfulness, this is to say that economics on the rule-making level is to be used to rationally constrain its use on the law-application level. The constraints are then to be respected – it makes no sense to argue a certain economics-based point about a case unless that point is relevant under the applicable rule. And if such a point is indeed material, the economic analysis cannot be "off the shelve;" it needs to respect the specificities of the given case.