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WHAT IS FORENSIC ECONOMICS?

Jan Broulík

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WHAT IS FORENSIC ECONOMICS?

*Jan Broulik**

ABSTRACT

This working paper provides an overview of the concept and practice of forensic economics by discussing four questions concerning the domain of this discipline. The first question asks whether forensic economics is a practical or academic enterprise, or both. The second one concerns the types of legal decisions that forensic economics informs, including three separate stages of law enforcement and the distinction between questions of fact and law. The third question relates to the fields of law to which forensic economics applies with special attention to tort damages and antitrust. And the fourth one regards the position of the people who carry out the forensic-economic analyses outside of or within an enforcement body.

INTRODUCTION

While it is universally agreed that economics has a forensic branch, no such consensus exists as to what it exactly entails (Christiansen and Ewald 2014, 144). The current working paper understands *forensic economics* as economics used to determine the facts of the case within any stage of law enforcement. Other commentary does, however, frequently adopt a different view, which may be narrower or broader in some respect. This paper considers four questions concerning the domain of forensic economics: Is it a practical or/and academic enterprise? What types of legal decisions does it inform? Which fields of law accommodate it? Who performs it? Examination of these questions provides insight not only into the concept and practice of forensic economics but also into the interaction between economics and law more generally. The paper draws significantly on scholarship concerning the economic determination of tort damages as well as the literature on antitrust economics, complemented by a wide range of other writings.

PRACTICAL OR/AND ACADEMIC ENTERPRISE?

A. Forensic economics is primarily practical

Forensic economics – as all scientific disciplines – generates knowledge on the subject under study. An important issue to consider with respect to forensic economics is the purpose for which knowledge happens to be generated. Generally speaking, one may seek knowledge for its own sake (academic reason) or to answer the question “what is to be done?” (practical reason). In the context of law, the practical reason takes a particular form – knowledge is sought in order to inform creation or enforcement of legal rules (legal decision-making). This duality of reason has been recognized for instance by Jaffe (1955, 244) with respect to fact-finding in general: “The finding is made for a purpose or function. It may be simply for understanding or putting our world in order. It may be, as is true of the law, in order to lay the basis for the exercise of power.”

The difference between the two purposes underlies the distinction between

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“usual” – academic – science and forensic science. Pure academic science develops and applies its methods in order to gain knowledge in itself. Forensic science piggy-backs on this enterprise, putting the methods to the service of legal decision-making.

These two purposes may also lie behind an instance of economic analysis: it may be conducted in order to improve our understanding of a certain aspect of the reality or to inform a particular legal decision-making exercise (cf. Lanneau 2014, 26). Forensic economics is primarily about (a subset of) the latter. Many commentators in this vein draw a contrast between forensic economics on the one hand and economic research in academic context on the other (e.g. Christiansen and Ewald 2014, 145; Gavil 2008, 199; Lianos 2010, 230; Lianos and Genakos 2013, 116). Also virtually all perspectives on forensic economics discussed below assume a practical character of the discipline. This character is further indicated by the fact that the US-based National Association of Forensic Economics (NAFE) was established by practitioners (Brookshire 2003, 22-23; Rodgers and Weinstein 2014, 175) and that almost all its current members make a living at least part-time by carrying out practical analyses (Ward 2014, 14). In short, an economic analysis is not considered forensic unless it is carried out in order to inform legal decision-making.¹

To be sure, the line between an academic and practical analysis may be sometimes rather fuzzy because, even if an analysis is not actually carried out for a legal decision-maker, it could still address a more or less practical problem and, consequently, a law-maker or law-enforcer might rely on its findings nonetheless. Yet, there usually are differences between the two types of analyses, the most distinctive factor being the numerous constraints faced by economic analyses informing legal decision-making. To give an example, although the law may to some extent facilitate access to data (Gerber 2009, 35-37), economic inquiries informing legal decision-making tend to work with poorer input than academic analyses (Ireland 1997, 64); for instance, as observed by Hovenkamp (2005, 46), “[e]conomists [in academia] often select markets for study because data gathering in them is particularly easy or other characteristics of the market tend to simplify economic analysis. By contrast, the markets for antitrust litigation are selected by plaintiffs, who pay scant attention to their complexity or may even regard it as advantageous.” Forensic analyses are also typically greatly limited by time (Christiansen and Ewald 2014, 146). The most essential constraint is then the law itself – this issue is discussed below in the context of law enforcement.

B. Academic forensic economics

The fact that forensic economics is primarily a practical enterprise does not mean that it has no academic branch. Consider for instance scholarship filling NAFE’s Journal of Forensic Economics, which “grew out of a desire by professional economic consultants and expert witnesses to establish contact with each other to discuss common problems” (Ireland 1997, 67). This scholarship is usually written by experts combining academia with practicing and serves as a foundation for many forensic economic opinions (Ward 2014, 9). Another example is “applied economic research targeted to the specific matters that arise in competition law proceedings” (Decker 2009, 179) published in other venues. In

¹ An analysis may inform legal decision-making through guiding other analyses that, in turn, inform legal decisions; see the following section.

other words, forensic-economic scholarship – rather than advancing knowledge for its own sake – aims to guide the practical analyses (cf. Tinari 2016b, 1). To be sure, also the distinction between forensic and non-forensic economic research is far from crispy, with the usefulness of an article for a practical forensic analysis being a matter of degree; still, however, it seems reasonable to closely link application of economics within legal decision-making to research that pays particular attention to issues that arise in this application by calling them both forensic.²

The scope of forensic-economic research gets sometimes extended to issues that are only ancillary to the use of economics in legal decision-making. To illustrate, Ireland (1997, 64-65) maintains that the research agenda of forensic economics includes “ethical issues involved in the twin roles of advocacy and computational neutrality by practitioners.” An academic discussion of these ethical issues has been provided for example by Thornton and Ward (2016). Another ancillary topic is suggested by Brookshire (1991, 285), who argues that academic forensic economics ought “[t]o improve our ability to effectively communicate existing and new methods and, thereby, to enhance the probative value of our economic analyses and conclusions”. This communication aspect of forensic economics has been addressed for instance by Tinari (2010, 403-404). Although scholarship on these ancillary issues has its value and there are often good reasons for presenting it at the same venues as actual forensic economic research, strictly speaking, it entails no economics and, hence, will not be further considered.

To summarize, there is virtually unanimous agreement that forensic economics is first and foremost a practical enterprise providing information required in order to make legal decisions. Its eventual academic branch is merely secondary and subordinate to this primary objective. That is why the following parts of this paper will focus mainly on the decision-making use of economics, discussing different aspects of and potential limits to its forensicity.

TYPE OF DECISION

A. Law-making versus enforcement

Before discussing the role of economics in legal decision-making, it is necessary to specify what is meant by a legal decision in the present context. There are two most general categories of decisions concerning law: those that make – or repeal or amend – legal rules (law-making) and those that apply the rules in order to enforce them (law enforcement). The former category includes for instance adoption of statutes by the legislature or delegated making of legal rules by administrative agencies. Law enforcement, also known as law-application or adjudication, by contrast entails administration of legal rules to individual cases by courts, agencies and other competent bodies.

It is a question whether economics used in law-making ought to qualify as

² A notable exception to the idea that forensic economics relates to legal decision-making is presented by Zitzewitz (2012). Zitzewitz operates with the term “academic forensic economics” when referring to economic analyses “carried out in order to advance the general understanding” of a particular category of social phenomena, i.e. not in order to – even vicariously – inform legal decision-making. He in particular focuses on economic detection and quantification of behavior which agents would prefer to conceal because of its unlawfulness and which is at the same time important to the functioning of the economy. He does not explain why economic analyses carried out in order to advance the general understanding of other law-related phenomena, such as economic consequences of traffic accidents, should not count as academic forensic economics. It is also far from clear what is to be gained by clustering this type of academic research under the rubric of forensic economics.

forensic. On the one hand, there are voices in favor, including several commentators from the antitrust camp. Christiansen and Ewald (2014, 154) in this vein observe that forensic economics “is not confined to supporting decision-making in individual cases, but ... it is also necessary for the development of general rules”. Schinkel (2008, 6) maintains that it “informs ... the choice of competition law rules”. Connor (2008, 31) defines forensic economics as economic analysis delivered to any governmental body making legal decisions, including “regulatory commissions.” On the other hand, if we look at forensic science in general, it is usually understood as science that informs resolution of individual legal cases. Science used in law-making is then referred to by other terms such as science of public policy or regulatory science. This distinguishing between the two types of practical economic analyses is perhaps motivated by the fact that the enforcement and law-making settings differ in various relevant aspects. Below I follow this latter view and focus only on economics serving law enforcement.

B. Enforcement and its stages

As mentioned, the competence to enforce legal rules may be enjoyed by a variety of bodies. Although some commentators confine forensic economics only to resolution of cases within courtroom litigation (see, e.g., Tinari 2010, 398), there is no reason to exclude use of economics in enforcement proceedings run by non-court bodies, including not only adversarial but also inquisitorial proceedings. Consider for example cases in which an antitrust agency acting as both prosecutor and decision-maker relies on economic analysis (see, e.g., Christiansen and Ewald 2014; Schinkel 2008).

Law enforcement consists of up to three distinct stages (cf. Kovacic and Hyman 2012, 535). First, whereas some enforcers are supplied with cases externally – e.g. by plaintiffs and complainants – others may need to detect suspect conduct on their own. Second, the core of law enforcement is the actual assessment of whether the conduct in question is lawful or unlawful; Hart (1994, 96-97) calls this liability-centered stage the “minimal form of adjudication”. Third, finding of an infringement usually triggers an additional stage consisting in specification of a remedy, such as damages or a sanction. The following paragraphs consider the applicability of economics within each of these stages.

The detection stage of enforcement may in some cases rely on economics. As a matter of fact, the definition of forensic economics adopted by the NAFE includes economics-based fraud detection as an example (see also Zitzewitz 2012, 731). To give an illustration from the decision-making practice, Schinkel (2008, 7-10) explains that economics gets used to find a potential antitrust violation by systematically screening the market; a violation is indicated for instance by a decrease in price volatility over time, correlated capacity investments or sudden atypical changes in sales conditions or product quality (see also Röller 2005, 19). Given the specificity of this enforcement stage and the relative rarity of using economics in it, the remainder of this part focuses only on the subsequent two stages.

Also the stage at which the enforcer assesses whether law has been breached may be informed by economic findings (e.g. Ireland 2016, 261). For instance, assessment of lawfulness of market practices represents the main habitat of antitrust economic analyses. Another example is provided by Tinari (2010, 406 n.4): “In certain discrimination cases, economists or statisticians may be retained to analyze the hiring/firing patterns of an employer. This type of analysis is used to assist the

client in the liability phase of a case.” Nevertheless, note that liability gets often decided without any economic input, even if the following remedial stage is economics-based (cf. Tinari 2010, 399). For instance, in a case concerning a car injuring a pedestrian, the question whether the driver acted against the law will be answered without the help of economics even if the eventual subsequent inquiry into how much compensation the driver should pay to the pedestrian happened to require an economic analysis.

The last enforcement stage concerns specification of remedies. Some commentators focused on civil litigation associate forensic economics only with this stage, and in particular with the quantification of damages. For instance Ireland (1997, 64) argues that forensic economics equals to “the economics of measurement and projection of damages”.³ Nevertheless, economics may also prove useful in specification of remedies other than damages, such as in “formulation and imposition of penalties and remedies” in antitrust law (Brunt 1999, 358).

C. Questions of law and fact

A crucial yet poorly understood aspect of using economics – and other sciences – within law enforcement concerns the distinction between questions of fact and questions of law.⁴ In a nutshell, the role of an enforcer is to base its decision on what happened, or sometimes will happen (see, e.g., Landes and Posner 1994), in the particular case at hand (question of fact) as well as on the law governing the case (question of law). The enforcer determines both the applicable law and the facts of the case, and then applies the former to the latter in order to arrive at a decision.⁵ These steps takes place as part of the assessment of lawfulness as well as within the remedial stage: To conclude whether there is an infringement, the enforcer determines the content of the substantive legal rule that governs the case and then the facts of the case that are material under this rule. If there is an infringement, the enforcer further determines the applicable remedial rule and the facts material thereunder in order to grant the prescribed remedy.

Hence, if economics is used to resolve questions of fact, it – “[t]aking the law as given” (Ward and Olson 1987, 2) – helps determination of facts relevant under the law (cf. Tinari 2010, 405). Whether economics will actually be used to determine a particular fact depends on whether it is suitable to the purpose and whether procedural rules allow its use (see below). Let us consider examples of economics-based resolution of a question of fact within the liability and remedial enforcement stages. If we think about the former stage, antitrust rules frequently stipulate that the lawfulness of a market practice depends on the share that the

³ The relationship between forensic economics and calculation of damages because this relationship has become the subject of an instructive debate taking place within the NAFE community. Namely, some of NAFE’s members had suggested that forensic-economic scholarship should not only inform calculation of damages under the existing legal rules, but also try to influence the rules’ content (e.g. Brookshire 1991, 287). In the words of Ward (2014, 7), “[t]he issue raised was whether forensic economists should address the legal parameters within which we perform our calculations.” The said idea, however, received only very limited support: “Based on our discussions at meetings and papers submitted to the [Journal of Forensic Economics], it appears that forensic economists are content to limit our research to methodologies for calculating economic damages alone” (Ward 2014, 15). This corroborates the view that forensic economics indeed concerns enforcement of law rather than its making.

⁴ Please note that the terminology is not settled in this context.

⁵ As explained by Hart and Sacks (1994, 351), the two steps in reality take place simultaneously: “[T]he law determines what facts are relevant while at the same time the facts determine what law is relevant.”

respective business holds in the relevant market. When such a rule gets applied to a particular case, it is necessary to determine what the relevant market is as one of the facts of the case. An economics-based determination of the relevant market (cf. Stigler 1992, 467) thus represents a resolution of a question of fact. As regards the remedial stage, we may illustrate the economics-based resolution of questions of fact on the example of damages. Legal rules governing damages usually provide that the amount to be awarded correspond with the harm suffered. A fact relevant under such a rule is thus the extent of the harm,⁶ and economics may in some jurisdictions be used to ascertain it (cf. Klevorick 1975, 237).

Economics may inform also resolution of a question of law (see, e.g., Schinkel 2008, 6; Sibony 2012, 40), which may take the form of interpretation or adjudicative law-making. This use of economics will be less common because the content of the rule will in most enforcement cases be clear and acceptable (see, e.g., Schauer 1985),⁷ requiring thus no interpretation or modification; and even if the enforcer actually does need to interpret the rule, other – non-economic – methods of interpretation might be more appropriate. To nevertheless give an example of a question of law resolved with the help of economics, in the US antitrust case *Leegin*, economic findings concerning the competitive effects of resale price maintenance were used to overturn a precedent governing this market practice.⁸

There is a substantial difference between economic analyses concerning a fact relevant under an applicable legal rule and the content of a legal rule. They address distinct issues and, thus, take into account distinct considerations. The difference between the two categories of analysis is recognized for instance by Dunoff and Trachtman (1999, 6-7), who call the former economic analysis *in* law and the latter economic analysis *of* law (see also Breyer 1983, 295; Klevorick 1975, 237-239; Stigler 1992, 466-467).⁹ It is noteworthy that this categorization suggests that inquiries informing resolution of enforcement questions of law are materially distant from those that concern resolution of questions of fact but close to those that have to do with (legislative or administrative) law-making. This reflects that the economic considerations to be taken into account, for example, when a legislature adopts an antitrust rule and when a court interprets it, are largely identical; very similar economic factors are logically relevant. One may, therefore, wonder whether not only analyses concerning questions of fact – i.e. facts of the case – should be considered truly forensic.

D. Economics and questions of fact

Resolution of questions of fact gets rarely addressed in legal discourse. Whereas the discourse pays a lot of attention to the process of resolving questions of law, questions of fact tend to be considered only secondary. According to Schauer (2009, 205), many commentators even believe that “making factual determinations is not really a matter of legal reasoning at all”. The topic is usually left to evidence law and theory, an esoteric area for most lawyers.

The fact that forensic economics concerns enforcement questions of fact has

⁶ That is why those who associate forensic economics with determination of damages may define it as “the application of economics to the ... quantification of harm from behavior that has become the subject of litigation” (Zitzewitz 2012, 731).

⁷ This applies also to vague statutory formulations that have been clarified by case law.

⁸ *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007).

⁹ It should be noted that the commentary mostly does not differentiate between academic and practical economic inquiries into the content of the law (i.e. economic analysis of law).

nevertheless important implications. First of all, each enforcement case is unique in the sense that the facts constituting it are unique. Every case of pedestrian injury caused by negligent driving is defined by a different pedestrian, driver, location or time. Every abuse of dominance concerns a different dominant business, abusive practice, product market, geographical market or time. What this means is that law enforcement is based on determination of specific rather than general facts. Forensic economics needs to deliver such facts (cf. Tinari 2010, 389) whereas academic science – including economics – usually seeks to capture generalities that recur in the world (see, e.g., Jasanoff 2005, S52). The individual character of facts that forensic economics aspires to determine represents its most distinctive feature.

Further, determination of facts constituting enforcement cases is significantly shaped by the law as such (Ireland 1997, 64; Schap 2010b, 346; Tinari 2010, 399). This shaping takes place in two ways. First, the task of forensic economics is to determine those facts of the case at hand that are relevant under the applicable legal rules. This may on the one hand mean that the economic analysis is circumscribed by these rules – if the law does not consider a certain factor relevant, the person executing the analysis cannot take it into account even though he or she otherwise would (Aubuchon 2009, 71). For instance, some legal systems “do not allow economists to add past interest to losses that have occurred in the past” even though economic logic would suggest doing so (Ireland 2016, 261). Conversely, the law may also necessitate information on issues that academic economists consider irrelevant. By way of example, consider the so-called relevant market, the determination of which marks an essential step in most antitrust cases. While this determination is usually performed by economists, “[t]he question of what is ‘the’ relevant market never arises in economics outside of antitrust” enforcement (Fisher 2008, 132).

Second, the law also directly regulates the process through which a question of fact is to be resolved. To illustrate, a legal rule may prescribe the method through which the defendant’s harm or the relevant market is to be determined in a case. There will also often be more general procedural rules, specifying for instance which evidence is admissible. In short, in law enforcement, “the methods of economics become tools to be applied according to the rules and procedures of the institutions and organizations that use them” (Gerber 2009, 24).¹⁰

FIELD OF LAW

A. Torts and other traditional fields

Another aspect of forensic economics to consider is the field of law to which economics gets applied. At least in the United States, the great majority of published scholarship as well as practical analyses that bear the forensic-economic label do concern tort law. This is reflected for instance by the JEL Code assigned to the said scholarship: “K13 – Tort Law and Product Liability; Forensic Economics”. The two types of tort cases to which forensic economics pays most attention are personal injury and wrongful death (Schap 2010a, 347). These cases occupy the bulk of articles featured in the *Journal of Forensic Economics* (Ireland 1997, 65; Ward 2014, 8) and, according to a survey of NAFE members, they contribute to the respondents’ practicing earnings on average by two thirds (Brookshire et al. 2009, 31).

¹⁰ Note that resolution of questions of fact is much more heavily regulated than resolution of questions of law (see, e.g., Ancheta 2006, 5; Cappalli 2002, 100; Davis 1987, 1540).

Nevertheless, forensic economics traditionally comprises also other civil cases. Tinari (2010, 398) gives employment termination and breach of contract as examples of such cases. Ireland (1997, 65) says that they include “divorce, business valuation, employment discrimination and some analysis of commercial litigation”. A similar list is provided by Ward (2014, 6): “commercial litigation, employment litigation, marital and property disputes”. And Schap (2010a, 347) mentions for instance business valuation and lost profits, marital dissolution, and workplace discrimination.

Publications that are explicitly called or generally understood as forensic-economic feature discussions of economic analyses applicable to these types of cases. Academic periodicals belonging to this category include, in addition to the Journal of Forensic Economics, mainly the Journal of Legal Economics run by the American Academy of Economic and Financial Experts, and the Litigation Economic Review, originally known as the Legal Economic Digest, published between 1995 and 2003 by NAFE (Tinari 2016b, 6; Ward 2014, 6 n.2). There are also many books addressing the application of economics to civil litigation such as Tinari (2016a) or Stephenson and Macpherson (2019).

B. Antitrust as a non-traditional field

By contrast, economics used in other legal fields, such as antitrust, is under the mainstream view not labeled as forensic. Granted, the definition of forensic economics presented on NAFE’s website does mention antitrust cases and also the research agenda set more than three decades ago in the very first issue of the Journal of Forensic Economics did include antitrust economics (see Ward and Olson 1987, 3). On the other hand, however, none of the forensic-economic journals has in reality featured more than a handful of pieces discussing application of economics in antitrust cases, and most prominent experts working on antitrust cases are not NAFE members (Thornton and Ward 1999, 103). Ireland (1997, 65) comments this exclusion of antitrust economics as follows: “In terms of published research and papers presented, antitrust law and the role economists play in antitrust litigation, while technically included within any reasonable definition of forensic economics, is really a subfield unto itself ... rather than ... forensic economics”. A similar argument is advanced by Schap (2010a, 347): “Conceived of as economics applied to legal matters, forensic economics is a broad field indeed. Some applications that could fall under such a rubric, for example antitrust ..., for tradition’s sake continue to be classified under other fields within economics.”

These quotes reveal that economics informing antitrust enforcement is, analytically speaking, forensic. What is more, a great number of antitrust scholars do refer to it as such (e.g. Christiansen and Ewald 2014; Connor 2008; Decker 2009; Eden et al. 1985; Gavil 2008; Hovenkamp 2017; Schinkel 2008). One may hence wonder what motivates other commentators to exclude it. The main reason appears to be that antitrust issues “require a significantly different and specialized set of skills and knowledge, quite different from the methods used in personal and commercial cases” (Tinari 2016b, 3). This could be to some extent surprising because economic analyses carried out in civil cases in fact build on a wide range of economic sub-fields (Brookshire 1991, 294) including price theory, labor economics and financial economics (Ireland 1997, 62; Thornton and Ward 1999, 101-102); nevertheless, according to the presented logic, these analyses are methodologically still closer to each other than to antitrust analyses. The sub-field of economics applicable to antitrust issues is the so-called industrial organization

(Blair and Sokol 2015, xiii; Christiansen and Ewald 2014, 143), which is also why some authors – instead of forensic antitrust economics (e.g. Connor 2008, 42; Lianos 2010, 256) or forensic economics in competition law (e.g. Christiansen and Ewald 2014, 144; Lianos and Genakos 2012) – speak about forensic industrial organization (e.g. Decker 2009, 197; Schinkel 2008, 3-4). In short, economics informing antitrust enforcement appears to be often excluded from forensic economics because it requires different expertise than the more traditional cases.

While there are clearly benefits to specialization, I do not see why the forensic label is to be usurped by only a sub-set of economics-based determination of case facts. To be sure, economics used in civil cases may be content-wise so distant from applications of economics to other legal fields that there is not much point in running joint publication venues or professional associations. The term forensic economics should however in my view refer to economics applied to any legal field. From an analytical perspective, the “forensicity” of economics – or, for that matter, of any scientific discipline – has nothing to do with the divides between different fields of law (and the eventual associated divides between different sub-fields of economics); it refers to the use of economics in determination of facts relevant under the applicable rules. And, as mentioned above, there are also practical concerns shared by any application of economics to enforcement questions of fact – be it in determination of damages or of the competitive effects of a merger – that will occasionally require lumping all these applications together. These concerns pertain to how methods of economics can be transferred from the academic setting to the context of law-application characterized by fact specificity, and to the procedural rules governing the enforcement use of economics.

PERSONAL DIMENSION

A. Experts' position within the institutional system

The last dimension of forensic economics that this paper will discuss regards the people who carry out the practical economic analyses.¹¹ Forensic economics is often identified with experts delivering a testimony to a court (see, e.g., Tinari 2010). It should, however, not be forgotten that expert opinions may serve as evidence also in non-court enforcement proceedings, such as those in antitrust cases in front of the European Commission. A broader understanding of forensic economics is thus possible as economics informing any enforcement case through an expert testimony. The prominent role of expert witnesses in forensic economics is evidenced for instance by the fact that NAFE is “an organization created by expert witnesses” (Rodgers and Weinstein 2014, 175), who had been “involved in expert testimony involving economics” (Brookshire 2003, 23).

Understanding forensic economics as provision of economic testimony to an enforcement body by experts external to the body amounts to viewing it as a private industry (cf. Brookshire et al. 1990; Connor 2008). This is because expert witness testimonies are provided through a market, where they may be commissioned either by a party to an enforcement proceeding or by the enforcer itself (Zitzewitz 2012,

¹¹ It might be worth adding that a rather idiosyncratic definition of forensic economics has been advanced by Ireland (1997, 64), according to whom the discipline amounts to “economics of economists as economic experts in litigation”. While analyses of incentives faced by practicing forensic economists and of their consequences may generate curious insights (see, e.g., Froeb et al. 2009), they do not inform legal decisions. Put differently, such analyses are to forensic economics what economic analyses of judges are to judging. It is simply a particular topic within the broader agenda of economics of economists (see, e.g., Zamora Bonilla 2002).

731). This business understanding of forensic economics is adopted for instance by Tinari (2010, 404), according to whom “[e]ntering the world of forensic economics implies that the economist will be involved in a ‘practice’, that is, a small business.” A similar portrayal is provided by Schap (2010b, 345-346): “[Forensic economists] have practices that range from the full-time academic economist involved in a relatively small number of assignments per year to the full-time independent [forensic economist] practicing solo who participates in dozens of cases annually to the large forensic economics firm where several [forensic economists] collectively handle hundreds of case assignments each year.” This categorization holds also for forensic antitrust economics (Connor 2008, 41) where the largest firms employ hundreds of economists. It should be added that the services provided by the said industry include not only actual testifying but also economic analyses supporting an argument that the party wants to make within an enforcement proceeding (Mandel 1999, 114) or informing compliance (Schinkel 2008, 9-10).

It is, however, a question why the forensic label should apply only to external experts hired mostly by litigants and not to people working inside the enforcement institutions. As regards for instance antitrust, economists strongly populate enforcement agencies (e.g. Padilla 2015) and may even act as – perhaps rather specialized – judges or their clerks (e.g. Lianos 2010, 262-263). One could liken such inhouse economists to FBI’s scientists involved in crime investigation and prosecution, whose work is considered forensic even though they are employed by the government. This appears to correspond with the conceptual observation that the content of a scientific analysis resolving an enforcement question of fact should not change regardless of who carries it out. If we think for example about the market power of a business, it is supposed to be determined in the same way be the determination carried out by an expert witness or a public official.

A reason possibly motivating separate categorization of external and internal economic analyses has to do with the differences between procedural rules governing their integration into the decision-making process. Namely, submission of an expert opinion proffered by an outside expert will often be more regulated than an analysis executed by an internal employee. Nevertheless, also the latter may face significant procedural constraints. And, what is more, the focus on individual cases and their facts, which is characteristic for forensic inquiries, is present anyway. Forensic economics may therefore be said to include also analyses of the facts of enforcement cases conducted by economists employed in public service (see also Connor 2008, 42; Schinkel 2008, 4).

B. Experts’ training (and sophistication of the analysis)

It is also a question what training one needs to have in order to be able to carry out forensic-economic analyses. While many expert witnesses as well as public servants working on economic analyses informing enforcement do hold a doctorate in economics (e.g. Brookshire and Slesnick 2016, 206), this is not a must. There are for example fewer and fewer graduates of doctoral programs in NAFE with the newcomers often focusing exclusively on practice rather than having academic ambitions (Brookshire 2003, 24; Rodgers and Weinstein 2014, 195). One may even do without any formal economic training at all. For instance Gerber (2009, 23) maintains that practical application of economics within the legal context is actually often carried out by non-economists. Nevertheless, despite the NAFE community believing that “forensic experience is more important to effective performance than is degree level or field of study” (Brookshire and Slesnick 2016, 206), one may

wonder how accurately such application accomplishes its purpose, i.e. to determine the facts of the case.

CONCLUSION

Forensic economics is economics used in any stage of enforcement – i.e. detection, liability and remedies – to determine the facts of the case. As such, it is strongly constrained by applicable substantive and remedial legal rules, which it takes as given. Another set of constraints is imposed by rules of procedure, including rules of evidence. Economics-based analyses of case facts may be carried out by people external to the enforcement body acting as expert witnesses, as well as by internal public officials. Forensic economics has also an academic branch, which addresses the question how to perform the practical analyses.

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