

The Practice of Forensic Economics: An Introduction

For presentation at the Eastern Economic Association Annual Conference,
Philadelphia, February 27, 2010.

Frank D. Tinari*

Over the course of the past four decades, economists increasingly have been called upon to offer their expert opinion regarding the valuation of economic losses related to specific events such as auto accidents, employment termination, breach of contract to name a few among numerous potential claims. This work has developed into the applied field that has come to be known as forensic economics. Its practice by economists invokes a multi-layered set of skills including (1) competency in economics, (2) effective oral and written communication skills, (3) a reasonable level of familiarity with relevant law, (4) acumen in operating one's practice as a small business, (5) the ability to withstand harsh criticism under oath, and (6) skillful management of interpersonal professional relationships. The purpose of this essay is to provide an overview of the practice of forensic economics, touching upon some of the key cited skills. My goal is that readers will come away with a succinct yet full understanding of the practice of forensic economics.

I. The Scope of Forensic Economics

The field of forensic economics (FE) in the United States first developed in the 1970s as various state courts began allowing expert testimony from an ever-expanding array of specialists in a wide variety of disciplines.¹ In the 1980s professional FE organizations such as the American Academy of Economic and Financial Experts (AAEFE) and the National Association of Forensic Economics (NAFE) were formed to facilitate academic research and provide forums for formal paper presentations as well as discussions of the practice of FE. A few years ago, the Board of NAFE adopted a definition of FE, as follows:

¹ Directories of experts today list specialties such as aviation engineers, computer systems experts, fire and explosion experts, entomologists, food scientists, industrial hygienists, boat and maritime consultants, a wide variety of medical experts, life care planners, psychologists, recreation and safety experts, surveyors, family counselors, zoning & planning experts, audio and video examiners, premises liability experts ad infinitum.

Forensic economics is the scientific discipline that applies economic theories and methods to the issue of pecuniary damages as specified by case law and legislative codes. Topics within forensic economics include (1) the analysis of claims involving persons, workers, firms, or markets for evidence concerning damage liability; (2) the calculation of damages in personal and commercial litigation; and, (3) the development and use of generally accepted forensic economic methodologies and principles. [SOURCE: www.nafe.net website.]

While technically accurate, the definition provides little guidance regarding the implementation of forensic economic methods in actual practice.² In other words, it is a necessary but not sufficient condition for forensic economists to become familiar with the scientific application of economics in the litigation context.

Our research indicates that most forensic economists are solo practitioners, typically holding a full-time position at an academic institution. Most hold an earned Ph.D., but other practitioners include accountants and financial experts.³

As noted previously, a successful forensic economist must become the master of the “art” of applying and communicating knowledge as a paid expert in a legal context. Let us first review, if ever so briefly, the legal aspects.

II. Legal Environment for the Calculation of Economic Loss

Economic damages or losses are claimed within a wide array of civil law cases.⁴ Civil law is subdivided into sub-fields such as death and injury, breach of contract, lost profits,

² The more specialized use of economists in antitrust cases is understood to be separate and distinct from the vast majority of standard tort economic loss or damages claims. Hence, consideration of such work is not included in the scope of this paper.

³ See the results of a survey of the members of the National Association of Forensic Economics and the American Academy of Economic and Financial Experts in Tinari & Grivoyannis, “Results of a 2001 National Survey of Forensic Damages Experts” August 2004, unpublished. (An earlier version was presented by Tinari at a NAFE conference, Cancun, Feb. 2, 2002.)

⁴ Rarely are economists called upon to value damages in criminal cases.

employment discrimination, and the like. Each of these types of cases is governed both by legislated rules (statutes) and the findings of case law. Further, the rules and cases differ among the states. For example, economic losses in New Jersey civil cases must ultimately be reduced to present value, whereas in New York cases the jury determines the total, undiscounted value which, in turn, is then subject to a series of post-trial calculations governed by statute.

Numerous other differences in methods and scope form the legal landscape from state to state.

In addition, civil cases may be filed in accordance with various federal laws such as those against gender or racial discrimination. Federal courts have their own rules, some of which are completely independent of state statutes, and require experts to provide more disclosure than is expected in a number of state courts.

All civil cases may be viewed as consisting of two parts: proving liability for the egregious act of one or more named parties, and proving the extent of economic damages, if any. The major focus of forensic economics is with respect to economic loss calculations.⁵ But such calculations cannot be carried out irrespective of the legal parameters affecting both the scope and methodologies permitted to be used. Thus, effective forensic economists are those who have familiarized themselves with case law and those statutes dealing with the calculation of economic damages.

III. Ethical Considerations

Economic experts comprise only one part of an attorney's resources garnered to help achieve a legal victory for the client. Litigation is an adversarial process that drives the parties to put the best face on their respective positions. This, in turn, filters down as pressure on experts to make assumptions, select facts and apply methods that would generate values most favorable to their respective side.⁶ Yet, experts, be they engineers, medical professionals, investigators or

⁵ 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.

⁶ See Johnson 1991.

economists, are expected to present to the court their professional, objective and unbiased opinions as an aide to the trier-of-fact (typically, a jury). Considerable writing and discussion has occurred over this inherent tension.⁷

Should an economist falter in this responsibility by offering a biased opinion, the door would then be opened to potential difficulties. For example, whatever bias was applied could be used against the expert by opposing counsel, either in the given assignment or in potential future cases handled by other attorneys who learn of the bias through their professional chat rooms and electronic lists. We forensic economists have learned that our reputation and credibility in presenting findings that are relatively immune to severe criticism are the most important aspects of our work as experts.⁸ If an expert can be easily impeached, the expert's usefulness to the client could be seriously impaired, leading to further difficulties in serving as an expert in future assignments. In fact, the courts have settled on well-developed requirements for the acceptance or rejection of expert testimony. In federal cases, a motion may be filed requesting a Daubert hearing to challenge the admissibility of an expert's testimony. Similarly, in many state courts, challenges are permitted. After hearing the arguments, the judge acts as "gatekeeper" and rules on whether or not an individual may provide expert opinion to the jury.⁹

Irrespective of the practical penalties that could be suffered by experts who have rendered biased opinions, professional associations have developed explicit statements spelling out minimal professional standards of ethical behavior that are expected to be followed by forensic

⁷ See Johnson 1991, Sattler 1991, and Tinari 1993.

⁸ See, for example, Sattler 1991.

⁹ A very helpful website managed by forensic economist Thomas Ireland contains a number of helpful listings including 'Legal Decisions Involving Admission of Expert Economic Testimony,' 'Legal Decisions Involving Standards for Damages in Wrongful Death or Survival Actions,' and 'Useful Cases in Forensic Economic Practice.' His website is listed at the University of Missouri-St. Louis as follows: <http://www.umsl.edu/divisions/artscience/economics/ForensicEconomics/useful.html>.

economists. While these ethical statements do not have the same force as legally-recognized standards in other professions such as accounting or engineering, they do make explicit what is expected of their members. In the case of NAFE, moreover, members are required to attest to their adherence to the Statement of Ethical Principles and Practice. (A copy of the Statement is found at the NAFE website.)

It should be noted further that the adversarial process occurs in stages and provides adversaries opportunities to exam the work of experts hired by the opposing side. This happens, first, when a written report is submitted for examination (and possible rebuttal) by the opposing side. It could happen again if the expert is deposed under oath, answering a series of questions about his or her background, work on the case, methodology used, materials relied upon, the expert's earnings doing litigation work, and the like. Finally, a third and final layer for potential exposure of an expert's possible bias is a courtroom trial either before a jury or a judge (the latter is called a bench trial).¹⁰ In all instances, it is the professional obligation of the expert to answer questions truthfully, irrespective of the implications of one's answers upon the parties' positions.

IV. Case Strategies Used by Attorneys

In our experience, many attorneys do not retain the services of an FE until the latter stages of a case. In some respects, this is a prudent decision, especially if there is doubt by the opposing party or parties regarding the strength of proof of their liability. A case may require substantial efforts by an attorney to gather evidence, garner the testimony of relevant witnesses, and gather the opinions of professionals regarding the cause of the allegedly wrongful event. It is understandable, therefore, that economic experts may be called upon relatively late in a case for their economic damages opinions. Nevertheless, there are at least three disadvantages to this common strategy.

¹⁰ See Tinari, "Competition for Forensic Economists and Their Ethical Behavior," *Journal of Forensic Economics*, Vol. VI, No. 3., Fall 1993, pages 263-269.

One problem is that the ability of the FE to gather relevant data and information may be restricted because the window of opportunity to make such requests is fast closing. Attorneys may tell the expert that “discovery has ended” or that “discovery is ending next week”. A second disadvantage is that a last minute request for an economic loss opinion may be put on a “rush” basis. This, in turn, exerts unwarranted pressure on the expert to generate a correct and comprehensive report of damages within a very tight time line. A third problem resulting from delaying the retention of a favored expert, albeit a problem for attorneys, occurs when a forensic economist has already been retained by the opposing side, thereby closing the door to the expected use of that expert.

Whenever possible, attorneys should be encouraged to engage the services of economic experts early in a case. While this may entail earlier payment of any required retainer fees, it does ensure that sufficient time will be made available to the FE to conduct appropriate research and analysis of the damages aspects of the case, thereby providing the best possible service to the attorney and his or her client.

Sometimes economic experts are retained and, upon analyzing the case information, realize that calculated economic damages are relatively small. In such cases, the expert may wonder why he or she was hired. There may be good reasons. For example, there may be substantial non-economic losses being claimed (e.g., pain and suffering) and the attorney simply needs an economic damages report to complete the picture of the claimed components of loss.

In other instances, attorneys know full well that a case will settle instead of proceed to trial. So they obtain an opinion of economic losses early in a case and serve the expert’s report to their opposition. Depending on the attorney’s reputation as well as that of his or her expert, this strategy could lead to an early settlement. Because the expert may not be aware of which strategy an attorney is utilizing, all that the expert can do is respond to the request being made for services, do the best job possible, and not worry about the whys or wherefores of being hired in a case.

It is well for the expert to remember that his or her services comprise only one part of all of the resources being gathered to mount a case. Therefore, experts should not worry too much about the impact of their work in a case. There are numerous possible outcomes to a case that could occur due to a variety of reasons. For example, the testimony of the plaintiff or witnesses was not credible; the skills of the attorney were inadequate to the task of mounting the evidence; legal rulings restricted the planned presentation of the arguments in the case; and/or the experts' testimonies were not persuasive or helpful to the jury. So it would be as inappropriate for an economic expert to take too much credit for a successful case award, as it would be to think the trial testimony of the expert "lost the case".

V. The Forensic Economics Assignment

An assignment seeking the professional opinion of an economist may take different forms. The most common is asking the economist to calculate the economic losses occurring as a result of a particular event such as an accident, job termination or breach of contract. Alternatively, an economist may be asked to review and critique the content and quality of an opposing economist's report of economic loss. Less common may be a request to calculate the value of one particular type of loss such as the present value of the components of a life care plan, the value of a person's household services, or the loss of a person's pension. It cannot be emphasized enough that the economist should do the job being asked, nothing less, nothing more.¹¹

Once hired by an attorney, the assignment becomes a job that will generate fees for the time spent by the economist. A detailed discussion of billing, setting fees, getting retainer deposits, getting paid by recalcitrant attorneys or clients, and other financial aspects of a forensic economic practice is beyond the scope of this paper. Suffice it to say that it is wise to keep things simple and straightforward. As an economist gains more experience doing FE work, he or

¹¹ Very experienced FE's will often find themselves advising attorneys on various aspects of economic damages prior to determining the scope of services needed.

she will also develop savvy business methods in accordance with his or her preferences as well as market expectations.

During the time one spends on a litigation assignment, it is imperative to keep meticulous records. Experts are often examined, either in deposition or trial, and must be in a position to answer any and (nearly) all questions, such as: When were you first contacted by the attorney? How much did you charge? On what date(s) did you speak with the plaintiff (or defendant) and what did you talk about? What documents did you rely upon? Better to retain all notes and documents (some of which could be discarded later) than to suffer criticism that your work is incomplete, sloppy or without adequate basis.

All of this presumes that the economist has been provided full and adequate information to enable him or her to conduct a proper valuation of losses. To this end, many FE's have developed questionnaires that they submit to the attorney, requesting that the requested information be required together with back-up documentation confirming the critical facts of the case. Frequently, upon review of the documents provided, the economist will determine that information is missing about one or more aspects of the case. Hence, further communication with the retaining attorney would occur, requesting the missing information. It is not unusual, therefore, to find that an assignment may extend for weeks or months as documents are being gathered.

Once the information has been assembled by the FE, the analysis and calculations begins. The next section provides an overview of some of the calculation issues encountered by economic experts.

VI. "Doing" Forensic Economics

Economic loss calculations involve a number of steps. But every analysis begins with a theory of economic damages. What would John Smith have earned had he not been injured? When would he have retired? But for his injuries, would he have received job promotions? Virtually all forensic economic calculations begin with this 'but for' model. Our job is to compare what actually occurred and what likely will occur, given the injury, to what would have

occurred absent the injury. This may appear to be a simple framework and, at its core, it is. Yet, as the expert delves into the details, and communications go back and forth with the retaining attorney, it is sometimes easy to forget the focus of the basic model.

Moreover, the expert is required to proffer opinions that fall “within a reasonable degree of certainty or probability.” Some have interpreted this to mean at least a 51% probability of occurring. Others have found courts making a big distinction between “legal probability” and “legal possibility.” As in other areas of interpretation, discussions with a retaining attorney would be helpful before proceeding too far in a particular direction of analysis.

As to the actual calculations, the first step usually is to establish a baseline earnings figure. Although this might seem like a straightforward arithmetic calculation, the expert’s judgment often comes into play. If the most recent labor contract calls for an annual wage increase that is lower than given in prior labor contracts, is it reasonable to assume the lower wage increments will apply in future years? If earnings have varied from year to year, would it be more reasonable to take an average? If so, for how many years? How should expected promotions be modeled? These and other questions would have to be addressed by the economist so as to arrive at a reasonable (and defensible) base earnings from which to make projections of likely future earnings.

Related to selection of the base earnings figure is the question of annual increments, i.e., the growth rate of earnings likely to have been experienced by the person, absent the incident that created the earnings loss. Short- and long-term horizons will affect the selection of the appropriate growth rate. For this purpose, some economists adopt the projections made by the economists who work for the Social Security Administration.¹² It is important to understand that whenever an outside source is used, the analyst must be familiar with the underlying source and bases for the figures.

¹² See the *Annual Report to the Board of Trustees of the Social Security Administration*.

Additionally, since the FE does not know if any given case will ultimately end up in a trial, it is best to keep the analysis as simple as possible while yet maintaining reasonable accuracy. For example, if the average increase in an individual's earnings over a given number of past years were calculated at 4.32%, it may be best to state that as 4.3%. Again, the economist's judgment, the "art" of forensic economics, would come into play.

Regarding numerical calculations, by far and away most forensic economists make use of computer spreadsheets to make all necessary calculations. Generally speaking, techniques such as regression analysis and matrix calculations are rarely invoked. So it may be said that economic damages calculations are not mathematically sophisticated – but the various calculations, while in and of themselves relatively straightforward, can make for a complex process when all the moving parts are combined. Attention to detail, therefore, would seem to be a prerequisite for this type of work.

There are numerous other calculations that would have to be made in a typical case. For example, there are instances in which a reduction of projected future earnings losses would be made by applying a probability of unemployment. This adjustment would capture the (small) probability that any given worker would encounter a period of unemployment. Then there is the question of worklife expectancy probabilities. Other considerations would include valuation of fringe benefits funded by the employer and now lost to the employee. And since the goal of civil litigation is to "make the person whole", lost fringes would be measured by the replacement cost, not necessarily the employer's cost, of the fringes. Sometimes stock options and/or stock grants comprise part of an employee's fringe benefits. The economist must exhibit care in attempting to value this type of fringe benefit inasmuch as specialized knowledge of option valuation would be required.¹³

¹³ See Bowles and Lewis, 1996, Tinari and Hager, 2004, Tinari, 2001.

In some states, statutes require that income tax liabilities be subtracted prior to arriving at an estimate of earnings loss. Again, a reasonable basis must be established when determining the appropriate tax rates to apply. Another consideration is what might be termed job-related expenses. If a person can no longer be employed as a result of some incident, then lost earnings are offset a bit by the savings of job-related commutation expenses and perhaps others such as special clothing or tools required of one's employment.

Loss valuations in many injury and death cases incorporate estimates of the replacement value of loss of ability to perform household services. In some states, other service losses to surviving family members are permitted to be calculated by the economic expert.

There is extensive literature on this topic, and the economist would do well to become familiar with the articles that have been published in the *Journal of Legal Economics*, the *Journal of Forensic Economics*, *Determining Economic Damages*, and other publications the focus of which is to examine the proper methodology for measuring lost services.¹⁴ In fact, it would be worthwhile to spend some time reviewing and understanding the FE literature if an economist were considering becoming involved in the world of litigation.

Most state courts require that the analyst's loss calculations be expressed in present value terms. Thus, the economist faces the problem of determining what is the proper rate of interest to apply. Again, there has been extensive writing about this topic within the litigation context. In some cases, statutes specify the basis for the rate. In most instances, however, it is up to the economist to select and be able to defend the stated interest rate.

VII. Giving expert testimony

Once a report has been submitted, a fair amount of time could elapse before hearing from the retaining attorney. If the case has not settled, there may come a time when the opposing counsel will ask to take the deposition of the expert. This simply means that the economist will,

¹⁴ Good sources include publications such as Martin *Determining Economic Damages*; *Dollar Value of Day*; Ward & Krueger 1994; Ireland & Depperschmidt; Kautman, Rodgers & Martin; Ireland et al, *Expert Economic Testimony*.

under oath, answer questions regarding his or her involvement in the case and the basis for the opinions rendered in the report.

In deciding to question the economic expert, attorneys may be employing particular strategies. One strategy is to “size up” the expert, especially if the economist is relatively new to the practice of forensic economics. Attorneys want to learn if the expert is calm and collected, or agitated and nervous under persistent questioning. They want to know if the expert is knowledgeable and competent. They are interested in knowing if an expert is clear and articulate in explaining his or her opinion.

Another strategy is to learn things about the factual basis, methodology, and the sources relied upon by the economist. Such knowledge may be helpful to opposing counsel should the case go to trial. Not every tough question will be asked at the expert’s deposition – those are sometimes held for trial cross-examination. Forensic economists may encounter calm and professional attorneys, but also may be faced with a bull-dog attorney, one who is aggressive in tone and questions. The expert, to be effective, must stay collected and not be fazed by the bluster. Above all, one should not take these “attacks” personally. From the opposing attorney’s point of view, he or she is simply doing the best job possible for the client.

Trial testimony is an art unto itself. At this stage of an assignment, the expert will be working closely with the attorney to determine how the testimony will be presented. Often, sample questions are developed and reviewed. A decision would need to be made with respect to the method by which calculations and opinions will be presented to the jury. Poster boards replicating the economist’s calculations and tables could be made up. Or, the same information could be loaded onto a projector for display in the courtroom. The most appropriate strategy is the one agreed upon by both the attorney and expert so that there are no surprises.

One’s retaining attorney may also discuss and prepare the expert for potential cross-examination questions or areas of questioning. It is best for the FE to discuss frankly any weak links in his or her analysis, or any problems in his or her background. One should always assume that, if there are any problems or errors or biases, they likely will be discovered by the opposing

attorney. Better to be prepared for potentially damaging questions than to assume the problems will not be uncovered.

Economists starting out in the FE field and who begin experiencing deposition and trial testimony will come to understand if their depth of knowledge, their effectiveness in communicating both with professionals such as attorneys and the average persons on a jury, and their degree of comfort in “being in the hot seat” of cross-examination are comfortable for them or not. As stated previously, the practice of forensic economics may not be for every economist. To that point, we next touch upon business requirements of running an FE practice.

VIII. The “business” of forensic economics practice

Entering the world of forensic economics implies that the economist will be involved in a “practice”, i.e., a small business. This implies that good business practices must be learned and applied. Research indicates that the typical forensic economist works alone or independently, and usually on a part-time basis while teaching in academia.¹⁵ Institutional faculty work does not necessarily provide sufficient experience in small business management, although time management and good communications should spill over to running one’s practice. But other skills need to be acquired such as preparing a useful retainer agreement, setting fees, developing reliable methods of fee collection, invoicing for services rendered, maintaining a complete paper trail of communications and work done, discerning when it may not be appropriate to accept an assignment, marketing one’s practice if so desired, and more.

Many practicing forensic economists have found attending conference sessions put on by NAFE to be enormously helpful not only for building their knowledge and skill base, but also for the advice gained from more experienced practitioners. In addition, members of both NAFE and AAEFE are eligible to join electronic discussion lists where questions on both the substance and the practice of forensic economics are answered, oftentimes in numerous helpful ways by members. It is the author’s experience that such participation yields enormous rewards, not the

¹⁵ See Tinari and Grivoyannis, 2005.

least of which is becoming acquainted with many wonderful people who may eventually become friends and colleagues.

Finally, if at all possible, a new forensic economist would benefit enormously from being mentored by a seasoned economist. This is not easy to do inasmuch as competition exists in each local market, thereby warranting against the willingness of economists to teach and train potential competitors. Nevertheless, it has been my experience that, with proper and reasonable non-compete agreements, it is possible for newer forensic economists to learn in this way.

IX. Conclusion

The field of forensic economics has come a long way since the early 1970s. Successful forensic economists can earn substantial income, but practice of this specialty is clearly not for everyone. The role of the expert in litigation is to assist the trier-of-fact in determining the economic impact of some harmful incident. As such, the work of forensic economists serves the larger socio-economic purpose of resolving disputes among members of our society.

Those who choose to become forensic economists enter an area of practice that requires gaining knowledge of legal parameters that guide the methods and measurements of economic loss. In addition, the economist must become thoroughly familiar with the accepted methods and sources in the field as developed in the FE literature. Perhaps just as important is the ability to apply one's trade in an ethical and professional manner. Finally, the solo practitioner must acquire skills in operating a small business. Those who venture ahead will find that the members of the FE organizations are extremely helpful. Success in the practice of forensic economics yields both professional and personal satisfaction.

*Professor Emeritus, Seton Hall University, and Principal Economist, Tinari Economics Group.

References

- American Academy of Economic and Financial Experts. www.aafe.org
- Bowles, Tyler J. and W. Cris Lewis, "Taxation of Damage Awards: Current Law and Implications," *Litigation Economic Digest*, 1996, 2(1), 73-77.
- Expectancy Data. *The Dollar Value of a Day*, Time Diary Analysis, Shawnee Mission, Kansas, 2008.
- Ireland, Thomas R. and Thomas O. Depperschmidt. *Assessing Family Loss in Wrongful Death Litigation: the Special Roles of Lost Services and Personal Consumption*. Tucson, AZ: Lawyers & Judges Publishing Co., 1999.
- _____, Stephen M. Horner, James D. Rodgers, Patrick A. Gaughan, Robert R. Trout and Michael J. Piette. *Expert Economic Testimony: Reference Guides for Judges and Attorneys*. Tucson, AZ: Lawyers & Judges Publishing Co., 1998.
- _____. University of Missouri-St. Louis web page: <http://www.umsl.edu/divisions/artscience/economics/ForensicEconomics/useful.html>.
- Johnson, Walter D. "Qualifications, Ethics and Professional Responsibility in Forensic Economics," *Journal of Forensic Economics*, 1991, 4(3), 277-85.
- Kaufman, Roger T., James D. Rodgers and Gerald D. Martin, eds. *Economic Foundations of Injury and Death Damages*. Northampton, MA: Edward Elgar Publishing, Ltd., 2005.
- Martin, Gerald D. *Determining Economic Damages*. Costa Mesa, CA: James Publishing, 2009.
- National Association of Forensic Economics. www.nafe.net
- Principal Economic Assumptions, *2009 Annual Report to the Board of Trustees of the Federal Old-age and Survivors Insurance and Disability Insurance Trust Funds*, Table V. B1, <http://www.ssa.gov/OACT/TR/TR09/tr09.pdf>.
- Sattler, Edward L. "Economists, Ethics, and the Marketplace," *Journal of Forensic Economics*, 1991, 4(3), 263-68.
- Tinari, Frank D. "Competition for Forensic Economists and Their Ethical Behavior," *Journal of Forensic Economics*, Fall 1993, 6(3), 263-69.
- _____. "How to Keep Your Winning Clients from Getting Shortchanged by the Tax System," *New York Employment Law & Practice* (NY Law Jnl. Affiliate), 2001 2(5), 6-7.
- _____ and Elias Grivoyannis.. "Results of a 2001 National Survey of Forensic Damages Experts" August 2004, unpublished.
- _____ and Christopher W. Hager, Esq. "Making Prevailing Plaintiffs Whole," *New Jersey Law Journal*, November 15, 2004, pp. S8-S9, S15.
- _____ and Elias Grivoyannis. "Estimates of Labor Productivity of Economic Damages Experts," *Journal of Forensic Economics*, Fall 2005, 18(2-3), (pub. July 2006), 139-53.
- Ward, John O. and Kurt V. Krueger, *Establishing Damages in Catastrophic Injury Litigation*. Tucson, AZ: Lawyers & Judges Publishing Co., 1994.