

"Pseudo-Economists - The New Junk Scientists," Federation of Insurance & Corporate Counsel Quarterly, Vol. 47, No. 1, Fall 1996, pp. 95-105.

INTRODUCTION

The increased use of economic experts in commercial damage cases, as well as in personal injury and wrongful death cases, has resulted in the emergence of a group of experts who offer economic services but are unqualified and ill-trained in economics. While the recent *Daubert*¹ decision affords judges a stronger gatekeeping role, stricter standards for experts will not emerge overnight. This growth in the use of unqualified experts thus calls for greater vigilance on the part of defense attorneys regarding an expert's credentials. Given the occasional laxity in admitting unqualified experts, attorneys must also be aware of the potential for bias in the assumptions and methodology that these so-called experts employ.

Unfortunately, with relatively inexpensive software, pro forma economic reports can be generated with a few keystrokes by those with little or no training in economics. In the past, the defense might have relied on subtle ridicule to discredit a biased economic assessment in front of a jury. More and more often, however, defense experts are being retained to counter the more egregious claims of unprofessional economic analysis by plaintiffs' "economists."

Before retaining such an expert, however, defense attorneys should learn some simple rules for assessing an expert's background and methods. Although every attempt should be made to bar unqualified experts entirely, the defense should also be prepared to challenge biased economic analyses. A little knowledge about this process can go a long way.

DEFICIENT CREDENTIALS

An expert's proper credentials, or lack thereof, can impact the jury and influence the weight given an economic expert's testimony. Thus, before examining the quality of the loss assessment by the plaintiff's expert, analyze the expert's credentials. Many economic loss assessments are prepared by would-be economists who have no serious economic training in a degree-oriented curriculum in economics or finance. These consultants are completely unequipped to prepare economic assessments of any type, and their work often demonstrates egregious bias. Defense counsel should seriously consider challenging the admissibility of any economic testimony proposed by experts who are not economists.

Irrespective of credentials, anyone can purchase a computer program that will calculate economic damages and print out tables. The purchaser then becomes an instant "expert." The purchaser's lack of academic credentials or the training necessary to determine appropriate economic assumptions for

input into the program is camouflaged by the professional appearance of the computer-generated results.

These pseudo-economists include nurses, psychologists, physicians and psychiatrists. Lacking any training in economics, such experts often merely multiply annual care costs by the number of years of life expectancy. This misstep leads to estimates that are grossly overvalued.

Sometimes the consultant's credentials only appear to lend themselves to economic testimony: mathematicians and certified public accountants frequently estimate the present value of a business or future lost income. But these professionals are not trained in estimating either future economic growth or the likely future rate of interest as a discount rate. Thus, they do not have the expertise to present their estimates on a present value basis.

Even more troubling, many physical rehabilitation and vocational counselors purport to provide economic forecasts. Some of these consultants are educated and trained solely as high school guidance counselors. In the author's own experience, one such rehabilitation expert merely had a degree in theology and some experience in career counseling; another was trained only as a social worker. Yet armed with a computer program and the Dictionary of Occupational Titles from the Department of Labor, these "experts" estimate economic losses in injury and death cases, indiscriminately plucking economic growth and interest rates from THE WALL STREET JOURNAL and other sources.

Some in this group also promote themselves as "vocational-economic" experts. Of course, there are qualified economists who have also received training as vocational rehabilitation experts; these persons are competent to render the services of both professions. But it is uncommon for an expert to have advanced graduate training in degreed programs in both fields. There is no accredited university curriculum in this country which admits to a degree in "vocational economics," nor is there any peer-reviewed journal associated with any university that is devoted to this amalgam.

Lastly, individuals from many other walks of life, e.g., stockbrokers to company comptrollers, financial planners to bookkeepers, also seek to serve as economic experts. For example, in the author's experience, one consultant hired to value a medical degree in a divorce case had been a homemaker for 30 years, possessed only a high school degree, and had recently earned a personal financial planning certificate.

Some consultants hold economic master's degrees in business administration. A number of MBA programs in fact do offer rigorous training in economics and finance (some with Nobel Prize winners in economics on the faculty). However, the MBA degree per se does not represent serious training in economics. A person with an MBA in marketing, for example, may have taken only introductory courses in economics. After hearing testimony on lost earnings from one such person, a trial judge commented that he had never heard an expert so "utterly and totally lacking in credibility."

Other consultants claim "postgraduate" training in economics, but their training is not in a degree-granting program. Anyone may take an economics course as a special student at a local college, or even at an Ivy League university, but this minimalist exposure is insufficient to create an economic consultant. Even if Einstein took a summer course in economics, he would not be an economist.

What does credentialize an economist? There is no substitute for serious

academic training, acquired through advanced courses in economics while registered in a degree-granting program in either economics or finance. Additionally, practical career experience in academia or in industry, working in the field of economics or finance, should be viewed as a necessity. Moreover, some practical experience apart from the witness' testimonial appearances as an expert would be desirable.

If the consultant does not have the proper education and training, barring the consultant's testimony should be relatively easy. If the judge does not exclude it, the cross examination should concentrate on demonstrating to the jury that the proposed expert is not an economist with proper training. If the expert is obviously unqualified, the lack of expertise may serve as an advantage to the defense at trial.

BIASED ECONOMIC ASSESSMENTS

Untrained or improperly trained economic experts sometimes use biased methods to portray favorable results for their clients.² The more adept defense counsel is at spotting these methods; the more successful he or she will be in curbing their effects.

Biased estimates often arise from faulty analyses of wages or lost sales. Lost sales may be attributed to the effects of a contract breach, libel, patent infringement, or other causes. Irrespective of the origin and type of loss, there are four principal determinants of such losses: (1) the earnings base, (2) the expected economic growth rate of such earnings, (3) the length of the period of future loss, and (4) the interest rate used to discount the losses to present value. How each of these is calculated may vary substantially. Biases that appear modest in any one of the four determinants can produce a significant bias in the overall result. Economists who employ bias in more than one of these areas can waylay an entire jury - unless the biases are effectively flushed out and routed. Many of these biases are simple to detect if counsel is knowledgeable about their existence.

A. Earnings Base

The earnings base is the estimate of the earnings that would have accumulated in the first year of the plaintiff's loss; it is the platform upon which all else is built. Often there are several prior years of earnings history upon which to base this estimate. But if this base estimate is biased, then every future year's estimate will be biased as well. Consider the following example.

Suppose that an earnings history, whether of a company, a product, or an injured employee, has progressed upwards over a five year period prior to the injury in the following increments: \$70,000, \$72,000, \$74,000, \$76,000 and \$78,000. This pattern appears to show steady growth, encouraging the casual observer to estimate the first base year's earnings at \$80,000, since the increase had been \$2,000 per year. Since this simplified approach neglects inflation, however, the earnings must be recalculated and restated in the same year's (constant) dollars. Wages or sales in different years cannot be compared without adjustment. If inflation for the five-year period in question had been 10, 8, 6, 4 and 2 percent respectively, the losses all recalculated and stated in

the base year's (constant) dollars are \$93,501; \$87,440; \$83,210; \$80,620 and \$79,560. This shows a distinct pattern of declining real wages, falling by an average of over 4.25 percent per year during the period. If future inflation is anticipated to remain at 2 percent, as it had been in the most recent year, the actual earnings might remain close to \$78,000 or even fall. This example demonstrates that the earnings base might be erroneously estimated at 2.5 percent higher than is justified. The earnings pattern cannot be properly detected unless the figures have been adjusted for past inflation. The impact of this error becomes highly significant when future growth is estimated, as noted below.

There are other ways to bias the base year. For instance, one might erroneously assume that recessions will not impact earnings, that overtime hours worked in the past will persist long term, or that economic expansions in an industry or in the overall economy will not end. Sometimes an economist will misleadingly use just one strong year's earnings to project the future, although prior years of layoffs and periods of reduced work hours are common in many industries. In estimating wage losses in fatality cases, the proper personal consumption must also be deducted: 30 percent for married people with no minor children, for example. Ad hoc decreases from commonly used consumption tables are difficult to support; nonetheless, some economists attempt that deduction without any justification.

B. Economic Growth Rates

While improper wage base estimates can produce significant bias, nothing effectively compounds the bias of an inflated earnings base like an inflated growth rate. Sales can grow based on changes in inflation, prospects for the industry, and overall economic conditions. Similarly, wages can grow based on increases in the inflation rate, merit, longevity, firm productivity, industry productivity, and rising general economic prosperity. Yet in the example cited above, growth rates above zero do not appear justified.

Over most post-World War II time periods, average wages have outpaced inflation, but the selection of the particular time period is important. Real wage growth rates (actual wage growth over and above inflation) were quite high in the 1950s and 1960s, averaging approximately 3.5 percent and 2.75 percent respectively during those two decades.³ Factoring those two decades into an average for future growth can therefore add significant bias. Seven of the last 20 years, including the years 1987, 1989 and 1991, have shown negative real wage growth. Of course, negative real wage growth cannot continue forever, but when an economist reaches back four decades to capture the high wage growth of a bygone era, the result is inherently unfair. The grand sweep of the last forty years is not generally believed to be representative of the future. Similarly, recent recessionary times are not expected to persist over the long term. A fair estimate uses the last twenty years or so as a standard. Moreover, a twenty-year average of past rates has been shown to be a good predictor of the future.

Real wage growth rates have averaged approximately 1.75 percent since the end of the Korean War, 40 years ago. Since 1972, however, the rates have averaged out at only 0.68 percent. The effect of assuming a 1.75 percent wage growth rate instead of a 0.68 percent rate is huge. Increasing an inflated \$80,000 earnings base by 1.75 percent for 30 years produces a future value of

\$135,000. By comparison, a fair \$78,000 base at 0.68 percent for 30 years produces a future value of only \$96,000. The difference constitutes an overestimate of nearly 40 percent! If a zero percent growth rate is justified, the bias grows to almost 75 percent.

C. Period of Economic Loss

Economists' reports often incorrectly overestimate the number of years over which the economic loss is projected. Thus, faulty economic assessments for commercial losses might incorrectly assume that damages will continue on indefinitely into the future, ignoring the fact that products have a finite market life and that company fortunes change for many reasons. (Witness Sears, IBM, and General Motors, to name a few). If a product is assumed to last 40 years and generates a million dollars in sales per year, the present value of those sales is \$23 million, using a discount rate of 3 percent. If the product only has an actual 10-year life, however, the present value falls to \$8.5 million, which is only a third of the inflated assumption. Even hula-hoops and yo-yos did not sell forever at their historic high volumes. While some products may have a stable, long-term future, many do not. Thus, limiting the years of future sales to a credible number is very important.

There are also acceptable standards for determining a statistically average worklife for people in the labor force. Most economists use work-life tables published by the United States Government, which depict the anticipated number of future years of participation in the labor force.⁴ These numbers certainly should be adjusted for age, race and gender. Alternatively, they can be adjusted for age, gender and education (but not race). However, some commercially available computer programs contain tables that attempt to "interpolate" the results for all four variables, but their data may not be reliable or authoritative, and the process may not be peer-reviewed. Thus, the validity of the data may be questionable. Any consultants who produce such worklife estimates should be rigorously examined about the preparation of their tables, as well as the reliability and validity of such tables.

Because the standard government worklife tables do not take unemployment periods into account, many economists likewise fail to reduce expected worklife for this factor. This failure results in a 5 percent to 7 percent upward bias for white males, and more for other categories of people in the workforce.

Furthermore, economists typically "front load" the worklife by assuming that future years of salary would have been earned through consecutive, full-time employment. The worklife estimate for a thirty-year-old white male is thirty years (excluding the effects of unemployment). However, this does not mean that a plaintiff would have worked consistently over the next thirty years. Rather, she or he probably would have worked thirty years cumulatively during the remaining forty-four years of life expectancy. To assume that it would be the very next thirty years significantly and erroneously increases the present value of the wages. The thirty years of wages should be spread out over all future years in a manner equal to the statistical worklife expectancy of an average worker, using government produced life expectancy, participation and employment rate tables.

Front loading worklife assumptions has the effect of significantly biasing present value upward, between 7 and 10 percent. Further, omitting the unemployment statistic produces a total upward bias of between 12 and 15

percent. If this bias exists in addition to the earnings base bias of 40 or more percent, there is a cumulative bias of at least 57 to 60 percent. It certainly benefits defense counsel to be aware of these tactics.

D. Present Value Discount Rates

Discounting to present value means valuing today those dollars which a plaintiff would not normally receive until some future date. (Recall the payout of the Million Dollar Fool's Lottery: one dollar a year for a million years.) Awards for losses of future earnings must be reduced (or discounted) to take into account today's lower value, as well as any uncertainty in receipt of the future earnings.

In commercial cases, one of the most common errors in discounting is to assume a discount rate based on safe United States Treasury instruments. This methodology fails to take into account the riskiness of the earnings from a patent, or from product sales. Financial analysts regularly discount future earnings using a risky discount rate, such as the return to small-capitalization stocks or even junk bonds. These rates can range 10 to 15 percent above the rate of inflation. United States Treasury bonds in 1995 were about 4 percent above inflation. The bias introduced by discounting future revenue streams at 3 percent, as opposed to 15 percent for any reasonable length of time, is greater than any other single bias that can be introduced. For example, \$80,000 per year discounted at 3 percent for 15 years is worth \$900,000, but when discounted at 15 percent, it is worth only \$450,000. The failure to take risk into account in the discount rate introduces a bias of 100 percent over a 15-year period. That bias is 300 percent over a 30-year period.

Another common plaintiff-biased approach is to use the so-called "total offset" method, which wrongly assumes that the discount rate is equal to the earnings growth rate, and that they thus precisely offset each other.

Consultants who merely multiply the earnings loss by the number of years of future loss incorrectly assume that growth and reduction to present value are needed. This assumption is especially biased in lost wage assessments, and is frequently used by vocational counselors and other non-economists such as accountants and mathematicians. Lacking serious economic training, these consultants cannot academically justify the selection of individualized growth and discount rates. By assuming that these rates precisely offset each other, the consultant who lacks the training of an economist entirely circumvents the problem of explaining and justifying the choice of specific growth and discount rates.

The problem, of course, is that these rates are not equal, and there is little expectation that they will be offsetting. By entertaining this simple but devastating assumption, another 40 percent or more of bias is introduced.

Most major texts in economic damages assessment recognize that this approach is patently plaintiff-biased.⁵ Even introducing this method as a plausible alternative is to demonstrate bias. The average discount rate since 1970 has exceeded the growth rate by more than 1.00 percent, even on safe United States Treasury bills.⁶ Currently, the discount rate should be greater than the wage growth rate by more than 1 percent, unless the specific assumptions are rigorously justified by the particular circumstances at hand.

Once again, the effect of assuming a total offset versus a discount rate 1.00 percent greater than the growth rate over a thirty-year period is huge. The

present value of a year's loss 30 years from now, based on \$80,000 in earnings today and using the total offset, is still worth \$80,000 dollars in present value terms. If the expert properly assumes that the discount rate is greater than the earnings growth by at least 1 percent, however, the present value of that thirtieth year is worth less than \$60,000. Thus the total offset produces a 35 percent upward bias just on this one assumption alone. Taken in combination with the biases noted above, the total offset bias can produce estimates that easily double a proper neutral analysis, all the while appearing to be within the range of credibility.

OTHER BIASES

There are myriad other sources of bias in economic loss projections. These can include the erroneous application of income tax effects, the faulty calculation of fringe benefits, and the failure to subtract the personal consumption of a catastrophically injured plaintiff from lost earnings.

Defense attorneys, however, should not routinely take the effects of taxes into account. Although the assumption is that taxation always lowers the present value of losses, it can raise the present value instead. The explanation is simple: taking taxes into account in lost earnings lowers the earnings base, but taxes on the interest earned over time must also be considered. Taxes lower the assumed after-tax interest rate, and hence the discount rate. The effect of lowering the discount rate can increase the present value of an award, especially when losses are generated far into the future. Generally, it is not favorable to include the effects of taxes on future losses unless the period of future loss is fairly short. A computer analysis should be performed in each case to resolve any doubt. It is thus not prudent to routinely accept tax-affected assessments.

In wage loss cases, proper calculation of fringe benefits likewise requires scrutiny. Tables published by government, industry and the United States Chamber of Commerce value vacation and other idle periods of time as if they were actually paid in addition to salary. This is widely regarded by most ethical economists as a clear double counting; time not worked must be subtracted from the calculation of benefits. Failure to make this adjustment can add another 10 to 15 percent to the wage bias.

Another bias commonly arises in catastrophic injury cases. Many of the services required by catastrophically injured parties are custodial and therefore are not true medical services. Yet the cost of these custodial services is often erroneously projected to grow at the much higher rate of medical care services. Furthermore, institutional care provides for the personal consumption costs of the injured party. However, there is a double counting if economists fail to deduct the expected personal consumption (rent, food, etc) from lost wages in an injury case. In these instances, this deduction is not only appropriate; it is essential.

CONCLUSION

Defense counsel need not be an economist to discover basic methodological flaws and biases in a plaintiff's economic loss report. The simple and obvious biases discussed in this article are easy to detect and

should not be tolerated by either side. More subtle biases in these areas probably require expert economic assessment with computer-generated verification of economic calculations.⁷ Biases can also exist in the calculation of household services losses, or in post-injury wage earnings as a setoff to pre-injury wages, but these are more difficult to detect.

Whether the economist has been retained by the plaintiff's attorney, or whether the defense attorney is reviewing the plaintiff's economic report, both sides should adhere to certain standards. Many economists adhere to these standards, but a keen awareness will help insure fairness.

In conclusion, it is essential to carefully examine the methodologies and credentials of the assessor and to challenge consultants who are untrained in economic analysis. As noted throughout this discussion, various computer programs allow anyone who can type to produce economic estimates. Such estimates are fine if produced by a paralegal assisting in the research. They are unacceptable, however, as "expert" witness testimony in court.

Should defense counsel retain an expert economist? If, after disclosing the plaintiff's biases, the plaintiff's economist responds by issuing a revised report, the goal is accomplished. But if a revised report does not issue, the defense might consider generating a "fair" loss estimate, using its own expert. An effective approach in generating alternative estimates is to accept as many of the plaintiff's economic assumptions as possible, while focusing on critical changes to the most objectionable ones. The expense of an expert may result in finding only a small percent of bias, but the savings in settlement or trial results can be substantial. Of course, all the economists in the world may never reach a fair conclusion. However, defense counsel should strive for nothing less.

1 - *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993).

2 - For a review of defense and plaintiff perspectives on more subtle earnings issues and for proper methodology for claims regarding lost supplemental benefits, household services, medical costs, and commercial damages claims, see MICHAEL BROOKSHIRE & STAN V. SMITH, *ECONOMIC/HEDONIC DAMAGES: THE PRACTICE BOOK FOR PLAINTIFF AND DEFENSE ATTORNEYS* (1987 & Supp 1991-93).

3 - US Bureau of Labor Statistics, *MONTHLY LABOR REVIEW*.

4 - US Department of Labor, BULL. No. 2254, *WORKLIFE ESTIMATES: EFFECTS OF RACE AND EDUCATION* (1986).

5 - See Gerald D. Martin, *DETERMINING ECONOMIC DAMAGES* 1201 (1991)

6 - EXECUTIVE OFFICE OF THE PRESIDENT, *ECONOMIC REPORT OF THE PRESIDENT* (current and prior years).

7 - These don't necessarily require hiring an economist. A number of software programs allow a paralegal to produce lost earnings reports using defaults and

case-specific assumptions.