



Forensic economics and the calculation of personal-injury damages

An overview of the role of the economic expert and some of today's more controversial economic issues

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Forensic economics is the application of standard methods of economic analysis, finance and accounting in order to estimate damages in litigation. The most important function of the economist is to assist the trier-of-fact in the task of deciding on a damages amount, should they find liability. An important distinction is that this is “forensic economics” versus “academic economics” or “corporate finance.” This distinction is important because forensic economics is really economics according to the rules of law, whereas academic economics is more the study of theory and corporate finance is

more attuned to financial decision-making for a business entity. In forensic economics, any time theory and law are in conflict in an economic analysis, law must prevail. The following discussions will apply to many states, but the examples are based on California jury instructions and case law.

A key way the forensic economist can know the guidelines of how they are to make their calculations is to ask the attorney that has retained them for the jury instructions which will be in use in the case. This will provide a framework to use in conjunction with their experience and training in order to provide the most accurate estimate of economic damages.

Loss of earning capacity

At the beginning of their work on any case with a loss of earnings, the economist should find out if the claim is being made for lost earnings or lost earning capacity. The difference is important because lost earnings is a claim for an amount based on a specific earnings level, i.e., what the plaintiff was making at a specific point in time, whereas capacity is based on what the plaintiff was able to do, what they could do.

CACI 3903D states:

To recover damages for the loss of the ability to earn money as a result of the injury, [name of plaintiff] must prove



the reasonable value of that loss to [him/her]. It is not necessary that [he/she] have a work history.

There are two issues related to earning capacity: the actual level of income lost, and the time frame over which that income would have been earned.

On the first point, consider the plaintiff who was working as a pizza delivery person at the time of their injury. If that plaintiff had been a pizza delivery driver for the past 20 years, then that is most likely a representation of their capacity. However, if that plaintiff was a pizza delivery driver while they were going to law school, then their capacity may be that of an attorney. It is important for the economist to know these facts in order to accurately estimate the damages. In this regard, it is often important for a vocational expert to lay the foundation for what the plaintiff could have done, but for the injury or death, since there are cases where it is not within the expertise of the economist to make that determination.

The second issue, the time period over which the damages are to be calculated, is one that is not without controversy. Here again, the economist can look to the rules to determine damages. Work-life expectancy, which some economists use to determine the amount of time over which damages are calculated, is the average number of years a similar person (e.g., a male with a high school diploma) would work for the remainder of their life. Work-life capacity, on the other hand, is the amount of years an injured person *could* have worked, but for their injuries or death. The difference is important: work-life expectancy tables make a number of deductions for possibility of unemployment, labor-force participation, death, etc. These reductions do not capture the capacity of the plaintiff. For instance, if a person chooses to take time off of work to care for a parent, that does not mean they don't have the capacity to earn money during that period. But this is exactly the type of assumption built into work-life expectancy

tables that artificially reduce the amount of damages calculated for an injured person.

An example of capacity versus expectancy, or "the average" is this: Suppose someone owns a house that has the capacity to sleep six, and that, on average, two people sleep there. Now suppose that house is completely destroyed. What needs to be replaced is the house as it was, with a capacity to sleep six, rather than a house that only sleeps two. The capacity, not the average, is what has been destroyed.

Reduction of damages to present value

Reduction to present value is a subject of continuing disagreement among forensic economists. Often two opposing economists will use the same underlying facts in a case and arrive at radically different present-value figures due to the disparity in the discount rate. Some economists will assign a higher discount rate to account for risks inherent in the work that the plaintiff did, particularly if a person was self-employed. While some may argue that it is proper to account for this risk, the discount rate is not the proper place to make that adjustment. This is because the present-value calculation is based on what we are assuming the plaintiff will do with the award, if there is one. We have to remember that any award is to replace what has been lost. The award should be invested and drawn from over the damages' period such that the balance at the end of the damages' period is zero. Using an inflated, high-risk investment vehicle invites loss of the investment corpus. In other words, the award which the trier-of-fact determined would make the plaintiff whole is put at risk.

The proper place to adjust for any inherent risk is in the calculation of the damages prior to reduction to present value. For instance, if someone was a self-employed carpenter, a history of their earnings can be examined for highs and lows. Taking an average of these

fluctuations will help to account for potential future-market fluctuations, and therefore the risk that the injured person potentially would have had ebbs and flows in their future income.

Offsets to damages: Collateral sources and personal consumption

An area that helps to highlight the difference between academic economic calculations and forensic economics according to the rules of law is the subject of offsets. An academic economic researcher attempting to estimate a before and after dollar difference in a situation might account for all sources of income. For instance, they might account for what a person was earning before injury, what they earn after injury, and what insurance benefits they might receive after injury. Adding all of these elements will arrive at a total dollar difference. In forensic economics, this is not necessarily the way the calculations are supposed to be executed.

The collateral-source rule has a long history and is the subject of legal research that is outside of the scope of this paper. However, we do know that, in order to follow the law as economists, we must follow this rule.

For example, let's suppose that a decedent was part of a pension program that provides survivor payments as one of its benefits. Those benefits were paid for in advance by the efforts of the decedent: through their employment with the entity that provides those benefits, a combination of employee and employer contributions, or premium payments, were made in advance to secure those payments. The collateral-source rule tells us that we do not make an offset for these survivor benefits because the defendant would be getting an economic benefit, the survivor benefits, that another party paid for (the decedent or their employer). When the law calls for such exceptions, then the law must be followed. For example, in medical malpractice cases in California, the defendant



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has a right to introduce evidence of certain payments made to the injured person (see California Civ. Code, § 3333.1).

Another area of controversy in forensic economic damages calculations is personal consumption. Generally, this deduction should be made from damages estimated in wrongful-death cases. For instance, CACI 3921 instructs, among other things: “The financial support, if any, that [name of decedent] would have contributed to the family during either the life expectancy that [name of decedent] had before [his/her] death or the life expectancy of [name of plaintiff], whichever is shorter.” Generally, the economist will make a deduction from income for the decedent’s personal consumption, or personal maintenance expenses, because the value of these would not have been available to support the family.

The most important distinction is this: to whom do the economic damages accrue? In a wrongful death case it is usually the family, although it may be to the estate. But what if it is a personal-injury case? In a personal-injury case where death is imminent, for instance in a missed-diagnosis, medical-malpractice case, some economists will deduct personal consumption from all income that would be lost after the plaintiff dies. This is an improper calculation. If the plaintiff is still alive, the case is a personal-injury case. The loss is to the plaintiff. It is not until death actually occurs, and the case becomes a wrongful-death case, that damages to the survivors are to be calculated. At that point, the personal consumption deduction should be made. Again, following the rules of law will guide the economist in properly estimating the damages.

A second area of controversy concerning personal consumption is in the calculation of household services. In a wrongful-death case, we can again look to CACI 3921: “The reasonable value of household services that [name of decedent] would have provided.” There are also personal injury cases wherein there are household services losses calculated. For

instance, CACI 3903E states: “The loss of [name of plaintiff]’s ability to provide household services. To recover damages for the loss of the ability to provide household services, [name of plaintiff] must prove the reasonable value of the services [he/she] would have been reasonably certain to provide to [his/her] household if the injury had not occurred.” Note that both of these instructions state the reasonable value of household services. They do not state the net value of household services. There is no instruction to deduct any sort of personal consumption. Yet some economists make this deduction.

But such a deduction cannot be measured, or even justified, when the point of the household services calculation is to estimate the replacement value of those services. Remember that the personal consumption deduction is made from income to account for expenses the decedent would have made for their own benefit. This same calculation cannot apply to household services because we are not talking about income but the value of what the decedent did. It matters not whether or not they enjoyed seeing a freshly cut lawn (a non-economic benefit) because they still performed the task of mowing the lawn.

If we are effectively estimating the cost in the market of hiring someone to mow the lawn, clean the bathroom, change the oil in the car and scrub the kitchen floor, how can such a deduction be made? In a death case, are we assuming the surviving household members will be contacting a housekeeping service and asking for a discount because the decedent also lived in the clean house? When we take the car to the mechanic, do we assume that the mechanic will be giving a discount because the decedent also drove that car? Said another way, will the housekeeping company hired be instructed to only clean a certain percentage of each room? Will the mechanic be instructed to only use four quarts of oil rather than five? Of course not. If the deceased performed these services, and now someone

else has to be hired to perform them, the loss is clearly the cost of hiring someone to perform the task. Finally, a review of the literature reveals no empirical study that has calculated which chores only benefit the decedent and have zero benefit to the rest of the household.

It should be noted that in jurisdictions where the loss is only to the survivors and the decedent performed household services exclusively for their benefit, e.g., the single decedent with no dependents, etc., then there is no loss of economic value of household services. If there were no surviving household members who benefited from the decedent’s services, then there is no loss to count. It is in this scenario that a forensic economist could be justified in espousing a personal consumption deduction, and that would be at the 100 percent level. If on the other hand, the jurisdictional loss is to the decedent, any deduction for personal consumption is inappropriate.

Conclusion

In a personal-injury or wrongful-death case the forensic economist is usually tasked primarily with estimating the value of economic damages. This can be a daunting task when information is imperfect, incomplete or non-existent. In order to estimate damages that will adhere to a legal standard (e.g., to within a reasonable degree of economic certainty), we must use the best empirical and statistically validated information available based on the evidence in the case. We should then combine this information with the legal parameters of the case, jury instructions, legal decisions and learned treatises, in order to properly estimate the damages. This will allow the forensic economist to calculate damages that meet the legal standard and to do their job of assisting the trier-of-fact.

References

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