

The Economics of Law: The Expected Value of a Case

By Dr. John F. Sase

With Gerard J. Senick, Contributing Writer and Editor

“A jury consists of twelve persons chosen to decide who has the better lawyer.”
--Robert Frost, American Poet and Playwright

“A lawyer’s performance in the courtroom is responsible for about 25 percent of the outcome; the remaining 75 percent depends on the facts.”
--Melvin Belli, American Attorney

As an economist, I (Dr. Sase) have had the privilege of working with attorneys for more than fifteen years. I have acted as a consultant, an analyst, a project manager of class-action suits, and an expert witness. Standing along the sidelines of the legal profession, I have seen practices that have pleased, inspired, confused, and bewildered me. In each case, both lawyerly aspects of the firm and its business practices come through. I cannot speak with authority about the profession of law. However, my confusion and bewilderment in viewing some legal practices pre-trial and in the courtroom come from my observation of more than 400 cases. For example, I have seen some attorneys using muddled, haphazard business logic in moving cases forward. Although I appreciate testifying in court, I feel that some cases should have been settled before going to Trial. The inherent problem seems to be an imprecise estimation of probabilities of success and failure and the expected value at different stages of the case.

In this month’s column, methods for addressing these issues in general terms will be offered in order to provide insight into case management for attorneys. Mr. Senick and I will provide an overview of the Expected Value of a Case separately for each step of the process and the case as a whole. This whole may be projected before an attorney begins to work on a case. By doing so, many attorneys can manage their practices more effectively and resultantly firm up their bottom lines.

Economists like to measure how much others earn as well as to explore the change in those earnings over the life of a person. The earnings of attorneys tend to peak during the decade preceding retirement. In respect to this trend, one can argue that high earnings result from and coincide with years of accumulated professional knowledge. A less formal though no less relevant interpretation comes as the development of gut instinct in respect to human behavior, the perception of what a court case is worth, and the probability of its outcome. Let us explore the third of these points.

In the fields of Economics and Statistics, we often refer to gut-intuition as “subjective probability.” We can define this theory as a developed instinct for survival and success that results from years of both life experience and professional experience. Apart from accumulated knowledge, financial success in one’s ripened years may be due to that proverbial knowing in the gut. As we place some exemplar percentages on the table and explore the probabilities of success and failure in litigation, let us remember the gut source from which these probabilities often emanate.

The Life of a Lawsuit

Not wishing to preach to the choir, we beg our readers to bear with us as we establish a common ground and a framework of reference for all. To this end, attorney/economist Stephen J. Spurr, J.D., Ph.D. of Wayne State University provides a general outline of the life of a lawsuit in the third chapter of his textbook *Economic Foundations of Law* (Thomson/Southwestern, 2006). He explains that a lawsuit commences when the counsel for the plaintiff files the Complaint that names a defendant. In response, the defendant files a written answer to the Complaint. These actions open up the case to the phases of case evaluation and pre-Trial Discovery. At this point, due to the “encouragement” of a judge facing a congested Trial docket, the two sides often may mediate the case. If both parties accept the mediation award, the lawsuit concludes. However, if mediation fails, the case moves on track for Trial. This does not mean that the Trial is eminent. A successful settlement conference may happen before the Trial commences, even occurring on the steps of the courthouse. Nevertheless, if the Trial proceeds to conclusion, then either the judge (in a bench Trial) or the jury will award recovery to the plaintiff—or not.

Attorneys may choose to retain me (Dr. Sase) as an Economic Expert before the time that a Complaint is filed. However, the greater likelihood is that they will bring me into the case during the Discovery phase. At this time, I review the Complaint, the Answers to Interrogatories, depositions, pertinent medical and vocational reports, tax returns, and other documentation that supports the claim for losses. In addition, I collect case-specific information about the plaintiff and close family members. I base my analysis and written determination of losses upon all of these records.

In approximately 15% to 20% of cases, opposing counsel elects to take my deposition to discover the items in my report on which I will base my rendered opinions if I testify at Trial. However, I have found that only a third of cases in which I have been deposed actually proceed to Trial. The ones that make it to Trial usually do so because of a failure to reach a final pre-Trial settlement. As the economic Expert Witness, I am not privy to the monetary amounts that are agreed upon in such settlements. However, as a professional who is viewing the cases, I am intrigued by the laws of probability that seem to enter into the decisions to accept or reject pre-Trial offers. Therefore, we will explore the science of probabilities that helps to explain how favorable outcomes may be reached at each step of a lawsuit.

On Minimizing the Social Costs of Litigation

Let us begin our exploration of this subject at the level of 35,000 feet. In recent decades, the public has focused its concern on reducing the cost of litigation within our court system. Therefore, in order to resolve cases, the implementation of formal pre-Trial measures has emerged. The existence of these measures will impact the decision probabilities that we consider below. Therefore, no one set of probabilities governs the likelihood of a successful outcome of a case at any step. Many factors can alter the chances of the success or failure of a case. These factors are both within and outside the control of the litigants. Even a highly seasoned attorney may not possess complete information when developing subjective probabilities for a case. Therefore, as we walk through the following example, we need to bear in mind that we are posing a fictitious case. Any resemblance to an actual one remains purely coincidental.

In order to begin, we need to consider the big-picture economics that address the societal goal of minimizing total social costs in the legal process. In recent years, these big-picture economics have led to Tort Reform. Total social costs equal the sum of administrative costs and the cost of errors in arriving at a decision in a case. Furthermore, we assume that administrative costs decrease as the cost of errors increase. These two costs are inversely related to one another. As a result, this means that we expect the existence of a minimum point in any measurement of these total social costs. Therefore, we have the potential to minimize these costs by settling upon an optimal level of administrative costs in respect to an acceptable margin of error. In part, the development of the Daubert Standard (a Supreme Court case law that requires compliance with accepted scientific and statistical methods) has addressed this issue by mandating a preferred 95% level of confidence (margin of error). The meaningful margin of error affects both plaintiffs and defendants as it emerges in the absence of perfect information in a case. Without perfect information, the court may end up awarding recovery to the plaintiff in an amount that is either too high or too low. Though one party may leave the courtroom delighted with the outcome of the case, the other side may not feel the same, considering the failure as a miscarriage of justice. However, let us move beyond this expansive topic in order to explore the decision-making process of attorneys as the case moves forward from the time of filing.

The Expected Value of the Legal Claim

The initial decision to file the Complaint should reflect the Expected Value of the Legal Claim as determined by the attorney for the plaintiff. At this point of the process, counsel compares the monetary and time costs of filing the Complaint against the Expected Value of the outcome. The subsequent chain of events includes the Discovery process, mediation hearings, settlement conferences, Trial, and the Appeal process. Each additional step bears a cost and a benefit as well as probabilities of success or failure. In Economics and other fields that use decision-science, we often model this chain of probabilities, costs, and potential returns visually with a Decision Tree. A Decision Tree is a tree-like graph of decisions and their possible consequences, including chance event outcomes, resource costs, and benefits. These trees are used commonly in decision analysis to help to identify a strategy that most likely will help one to reach a goal. In this current application, it is a Probability model for arriving at a best choice.

The decisive act of filing a Complaint implies that a commitment of both time and money has occurred. This sunk (non-recoverable) cost has a bearing upon subsequent decisions of whether or not to invest additional resources in the process of exchanging information in Discovery or reaching a settlement early in the case. For the sake of this example, let us assume the following about a case: The merit suggests that the probability of an offer of a modest settlement from the defendant carries a value of 70%. However, in considering such an offer, the counsel for the plaintiff should not dwell on the previously sunk costs. The more relevant factor in this decision-making is the additional cost of Discovery.

Therefore, at this juncture, the Expected Value of Settling the Case after Filing the Complaint equals 70% times the net settlement amount plus 30% times the difference between the expected value of bargaining post-Discovery and the costs associated with the Discovery phase. This expected value constitutes a weighted average of the outcomes, such that the weights are the probabilities of two alternative courses of action. At this point, they are 70% and 30%.

Next, we assume that the client has decided to forego an early settlement. Therefore, counsel proceeds to the next step of the case. The idea emerges that the investment to undertake the exchange of information during Discovery will bring a net return that exceeds the initial offer. We will attach a subjective probability of 60% to this anticipation. In turn, this means that now we face a 40% probability of either abandoning the case or proceeding to Trial. Since all of the costs of filing and Discovery are sunk (cannot be recovered directly), the plaintiff's attorney must weigh the net Expected Value of a Post-Discovery Settlement against the time/money costs of proceeding to Trial. At this second juncture, the Expected Value of Settling the Case after Discovery equals 60% times the net value of the post-Discovery settlement plus 30% times the difference between the award expected at Trial and the additional cost of taking the case to Trial.

Let us pause for a moment to address the issue of accumulated costs to date. These are known, fixed, and sunk. The decision of whether or not to proceed to the next phase of the case remains a matter of evaluating and comparing the additional incremental costs and benefits that are associated with Trial. In Economics, we refer to this decision-making process as Marginal Analysis. It demands that we ignore the preceding investment, which is fixed and sunk. This analysis ONLY considers the future incremental amounts in making a decision. It is a concept that is the most difficult to understand and to explain in decision-making. However, this is the way that sound business decisions are made, on the margin.

Of course, one hopes to recover accumulated past investment in the case. However, if we have done our math properly up to now, we should have factored the accumulated costs into the determination of the "net" Expected Value of the Case. In addition, the probabilities and net values associated with the additional steps of the case affect the sequence of Expected Values. In other words, in this systems approach, the determination of the net Expected Value of the Trial Award should take the risk associated with the Appeal process into account, as the determination of the Expected Values backward to the post-filing offer will have captured the risk of each subsequent step in the case.

Back to the "Easy" Stuff (LOL)

Let us return to our example. If we assume that the client does not accept the pre-Trial settlement offer, then the case proceeds toward Trial. At this juncture, we need to calculate the Expected Value of an Award Made at Trial. The amount of the award must reflect information about the likelihood of an Appeal. Apart from this, the calculation of Expected Value resembles the preceding ones. Let us assume that there is a 50% probability of receiving the expected award amount from the judge or jury. Alternately, this implies that there is a 50% chance of losing the case at Trial. Again, let us consider the marginal net gain of moving the case forward. The Expected Value of the Award equals 50% times the net Trial award plus 50% times the Trial costs (with an award of \$0). As suggested above, the risk is that a decision favorable to the plaintiff at Trial could be appealed. Therefore, before proceeding with a case, some consideration of this possible outcome must be taken into account. The Expected Value of the Appeal equals the probability of success times the net Trial Award plus the probability of failure times the cost of the Appeal process.

Raising and clarifying one's consciousness in order to see the perspective uses of this methodology with greater clarity can help many attorneys to make wiser decisions. We have outlined an overview of some general techniques for pre-evaluation of a case before filing the

Complaint. These techniques are not magical cures for improving this aspect of case management. However, just like practicing scales, chord changes, and rhythmic patterns in music, this technical exercise can clean up the murkiness that may exist in one's practice.

In this article, we have outlined the mechanics of the Economic facet of the case-management process. However, there is no easy fix. Successful case management is a matter of discipline and of practicing some of these decision-science methods over an extended period of time. This approach has proven to be beneficial to professionals in many fields. For attorneys, the application of the methods outlined above will result in a positive return on their investment of time, money, and effort. What does the attorney need to do in order to apply these methods to his/her case load? At the beginning of a case, gather as much information on the case as possible. Then, rough out an income statement that reflects all of the costs and benefits that will be incurred as well as the probabilities of various outcomes of different stages as they will develop. Revisit this evaluation method at major points throughout the life of the lawsuit. By studying decision-making methods and working with their models, attorneys will find that there is continuous improvement in the management of their practices.

Of course, there may be valid reasons why some case-management actions seemingly defy the logic of this decision-making process. In some instances, a settlement at a late stage may not be sufficient to recover attorney costs in contingency-based cases. Also, defense counsel from larger firms may be under supervisory pressure to accumulate more billable hours by extending the assignment. Such exceptions create offsets to any established set of probabilities. Despite the existence of some actions that defy the logic of the decision-making process, this approach is a standard for sound management practices and provides the most return on the investment.

Now that we have walked through the entire chain of events, we have the pieces to evaluate a case at its starting point before the Complaint is filed. In order to accomplish this task, we need to work the calculations backward from the Appeal process through the entire series of Expected Values discussed above. As the complexity of this determination would take us beyond the limited scope of this column, let us leave the venturesome reader with a reference source that explains the mechanics of determination in detail. In their book *Law and Economics* (Pearson/Addison Wesley, 5th ed., 2008), Robert Cooter and Thomas Ulen include a chapter entitled "An Economic Theory of the Legal Process." This chapter presents a numerical example similar to ours along with Decision-Tree diagrams. In addition, you can contact me, Dr. Sase, and I will walk you through the material.

A PDF copy of this article is posted at <http://www.saseassociates.com/legalnewscolumn.html>. We continue to post videos related to our monthly column on www.YouTube.com/SaseAssociates.

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