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AN ECONOMIC ANALYSIS OF TORT LAW

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INTRODUCTION

“Law and Economics,” also known as economic analysis of law is distinctive in its own way as it not only emphasizes on the efficiency of the legal system but also focuses on the incentives and response of the people to it. The law and the legal system exert great influence on the functioning of the economic system. Economists have made important contributions to the analysis of many areas of the law – particularly competition law, labour laws and regulations and international trade – during the last 200 years. It is only in the last century, however, that economists and legal scholars using economics have turned their attention in a systematic way to the analysis of torts, contracts, and criminal law. The Economic Analysis finds its application in the field of Tort law primarily due to its relatively simple structure.

Economic models have been applied to virtually every aspect of tort law – negligence rules, causation, onus of proof, intentional torts, informed consent, *volenti*, to name only a few. In no way the economic analysis of these doctrines undermines the traditional legal analysis but, it helps to consider these issues from a different angle.

The aim of this assignment is to analyse the economic aspect of tort law. It talks about the economic spirit of tort law, the economic interpretation of the traditional legal theory, the characteristics of the economic analysis and also the economic model of law.

ECONOMIC SPIRIT OF TORT LAW

Coase Theorem, a legal and economic theory developed by economist Ronald Coase, affirms that where there are complete competitive markets with no transactions costs, an efficient set of inputs and outputs to and from production-optimal distribution will be selected, regardless of how property rights are divided.¹ Thus, as per the theorem, all the obstacles to bargaining are termed as transaction costs. This theorem very well defines tort law in the economic sense. Tort law in its economic spirit concerns relationships among people for whom the transaction costs are relatively high. Economists refer to harms that are outside the scope of private agreements between two parties as externalities and also suggest that the economic purpose of tort liability is to induce injurers and victims to internalize the costs of harm that occurs from failing to take reasonable care.² The question that arises is how does Tort Law internalize cost. The answer to it is that Tort law internalizes cost by making the injurer compensate the victim. Thus, the economic essence of tort law is its use of liability to internalize externalities created by high transaction costs. Tort liability is only one of the policy instruments available to internalize externalities created by high transaction costs. There exist other policy instruments like criminal statutes, safety regulations, and tax incentives.

DEVELOPING AN ECONOMIC ACCOUNT OF THE TRADITIONAL THEORY OF TORT LIABILITY

As per the traditional theory of Tort Liability, there are three elements that need to be satisfied for recovery by the plaintiff³:-

- 1.) The plaintiff must have suffered harm
- 2.) The defendant's act or failure to act must cause the harm

¹ Jim Chappelow, Coase Theorem, INVESTOPEDIA (May 15, 2019) <https://www.investopedia.com/terms/c/coase-theorem.asp>.

² Cooter, Robert and Ulen, Thomas, "Law and Economics, 6th edition" (2016). Berkeley Law Books, Book 2. (Pg- 189-199).

³Ratanlal & Dhirajlal, *The Law of Torts*, 24th Edn-2004, Wadhwa, Nagpur.

- 3.) The defendant's act or failure to act must constitute the breach of a duty owed to the plaintiff by the defendant.

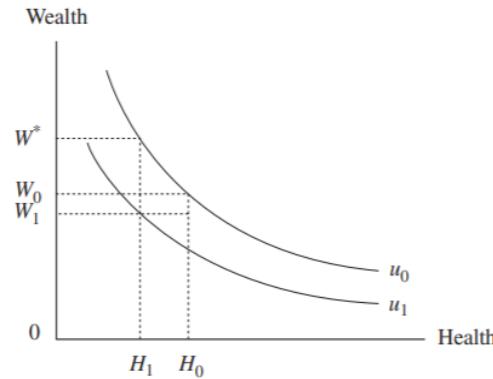
We will understand each element and try to develop an economic account of it.

- 1.) Harm- It is the first element that needs to be satisfied. A suit in tort shall not exist in absence of harm to the plaintiff. Harm refers to the violation of legal right of an individual and may or may not include the physical harm or damage. Example: In a car accident between A and B caused due to the negligence of B, it is important for A to show that he/she has suffered harm.

The economic interpretation of Harm indicates a downward shift in the victim's utility or profit function.⁴ Let us discuss the example considered above. A's utility function in the Figure 1 is defined over two goods- health (represented along x-axis) and wealth (represented along y-axis). Indifference curves in the figure u_0 and u_1 , depicts all the combinations of health and wealth that give A the same level of satisfaction. Higher indifference curve indicates higher level of satisfaction. Thus, any combination of health and wealth that lies above u_0 is more desirable to A than any combination that lies on or below u_0 . Now as B injures A, A's health falls from H_0 to H_1 and his wealth falls from W_0 to W_1 . A has been harmed due to which the satisfaction that he gets declines from u_0 to u_1 by B. Perfect compensation requires B to restore A's satisfaction to level u_0 . Thus, here as the harm was caused to A by B, there has been a downward shift in the victim's utility or profit function. This is the economic interpretation of Harm.

FIGURE 1- Showing harm as a displacement from a higher to a lower indifference curve and the measures of compensation,

⁴Supra note 2.



Traditionally there were only a few harms for which a victim could receive compensation under the tort law and the courts were reluctant to compensate for intangible losses or those difficult to measure, such as emotional harm, distress, loss of companionship etc. Over the years, however, courts all over the world have steadily expanded the list of compensable harms to include many intangibles.

2.) Causation- It is another important element of tort and in order for the plaintiff to sue, the defendant must have caused the plaintiff some harm. The element of causation sharply differentiates torts from morality.⁵ If “n” no. of people commits an immoral act, only those people would be held liable who have caused the harm to others. The law identifies two types of causes. The first and more comprehensive is “cause in-fact.” There exists a test called the “but-for test,” to decide whether action of A was the cause-in-fact of event B: “Did B occur as a result of A or not?” If the question finds its answer in affirmative “yes” then A can be termed as cause in-fact of B and if the answer is “no”, then it can be safely concluded that A is not the cause in-fact of B. However, in cases where there are multiple causes of harm, this method cannot be used. History shows that the courts have struggled a lot in order to come up with a theory that would assign liability in cases where probabilistic harms are materialized. Using the method of regression analysis can help an economist to estimate the increase in probability.⁶ All variables with positive coefficients are contributing causes, and the variable with the largest coefficient is the most substantial cause. Example: If the person develops lung cancer and sues someone,

⁵Supra note 2.

⁶Supra note 2.

the court could assign full liability to the most substantial cause, apportion liability among the contributing causes, or find no liability.

A famous philosopher, Bertrand Russell, argued that science advances by replacing the imprecise concept of “cause” with the precise mathematical concept of a “function.”⁷ The idea of cause’ in tort law relates to ‘functions’ in economic models. In economic models, the consumer’s preferences are described by a utility function, and the producer’s technology is described by a production function. The values of the variables in the utility function determine the consumer’s level of utility, and the values of the variables in the production function determine the level of output. The consumer chooses the values of variables that he or she controls in the utility function to maximize it, and the producer chooses the values of the variables that he or she controls in the production function to maximize profits. One person is said to harm another when the variables that he or she controls lower the utility or production of the other person. When the same variable appears in different people’s utility or production functions, the functions are “interdependent.” An externality is constituted by the interdependent utility or production functions whenever an obstacle prevents the parties from bargaining with each other to reach an agreement and set an interdependent variable at the efficient value. The term “cause” in tort law primarily indicates an externality which is created by interdependent utility or production functions.

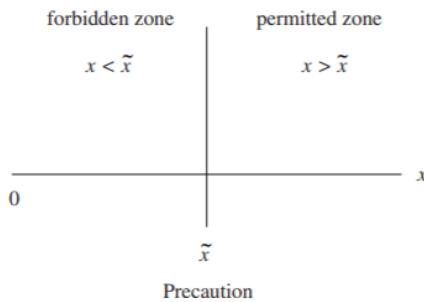
- 3.) Breach of Duty- In addition to these two elements, the plaintiff must usually demonstrate that the defendant breached a duty that he or she owed to the plaintiff, and that the breach caused the plaintiff’s harm. An economic representation of fault shows that there exist two types of faults. Some fault is binary (either-or, yes-no, on-off). For example, either a passenger fastens her seat belt or she does not fasten it. In certain cases, the legally established standard of care applies to a continuous variable also. For example, a bike changing speed continuously. Thus, to tackle such hindrances the Economists prefer to adopt theories involving continuous variables.⁸ Consequently, precaution by the

⁷ Bertrand Russell, On the Notion of Cause, 13 PROCEEDINGS OF THE ARISTOTELIAN SOCIETY (1912–1913).

⁸Supra note 2.

continuous variable is denoted with x , with larger values of x corresponding to higher levels of precaution. The plaintiff in a tort suit must usually demonstrate that the defendant breached a duty owed to the plaintiff. A duty of care is a legal standard prescribing the minimum acceptable level of precaution. Figure 2, denotes the legal standard. Precaution below the \tilde{x} mark breaches the duty of care, and precaution equal to or exceeding it satisfies the duty of care. Precaution partitions the line in Figure 2 and creates two zones—a permitted zone and a forbidden zone.

FIGURE 2- Legal standard of care of continuous precaution.



Forbidden zone implies that the actor is at fault, whereas the permitted zone implies that the actor is not at fault. Under a negligence rule, decision makers who take precaution as great as or greater than the legal standard escape liability for another person's accidental harms. It is important to note that whenever one of the two parties take less precaution than that of the standard which is legally established, he/she has to compensate the other person who has suffered harm in the accident. Fault is determined by law as the failure to take care that a reasonable man would take in ordinary circumstances.

CHARACTERISING THE ECONOMIC ANALYSIS OF TORTS

There are two fundamental characteristics of the economic analysis of torts which makes it unique and distinguished from other studies of tort.⁹

First, economists take a “positive,” or “scientific” approach to identify the legal doctrines and make an attempt to determine what the law “is” instead of trying to determine what the law “should be.” They suggest to use the deductive approach method and derive appropriate reasoning for the principles on which the judges’ reasoning is based and test those reasonings by comparing their predictions against the decisions which judges have made. Example: Economic analysis can be used to predict that the courts will, under most circumstances, reject the defence of “custom.” This prediction can be tested by observing whether the courts do or do not accept that defence.

Second, all economic analysis of tort law considers that the legal system behaves *as if* it was attempting to devise legal rules which would encourage individuals to maximise social benefits net of social costs. Example: If there is some accident-avoiding behaviour whose cost is less than the resulting saving in accident costs, the courts are predicted to adopt rules which will encourage adoption of that behaviour. However, it cannot be argued that judges consciously act in this manner. The doctrines that have been selected by the common law courts have developed *as though* this was the goal of the courts.

This view of the functioning of the courts suggests that the courts will behave as if they were employing an *ex ante* (or “forward-looking”) approach to decision-making in which the courts recognise that any decision they make in the current case may influence the behaviour of parties in similar, future cases as opposed to *ex post* (or “backward-looking”) approach in which the court is assumed to take the position that, as the tortious act has already occurred, that act cannot be undone.

⁹ Christopher Bruce, Applying Economic Analysis to Tort Law, ECONOMICA (June 1, 1998)
<https://economica.ca/applying-economic-analysis-to-tort-law/>.

ECONOMIC ANALYSIS OF TORT LAW

The economic analysis of the law of Torts generally, has both positive and normative dimensions.¹⁰ Positive economic analysis seeks to explain tort law by rationally reconstructing it i.e. by demonstrating how and to what extent existing doctrines exhibit economic efficiency. Normative economic analysis, on the other hand, can be understood as making either of two claims. In its modest version, normative economic analysis makes a conditional claim i.e. if the desirable goal of tort law is to promote economic efficiency, then the rules of liability ought to be such and such. In the ambitious version of normative economic analysis, it can be seen that there is a transition from hypothetical to categorical. For example, the rules of the game should be such and such. All forms of the economic analysis of torts require specifying a model from which one can derive the efficiency of various kinds of liability rules under different circumstances. The difference between positive and normative economic analysis lies in the use to which the model is put. The point of positive economic analysis is to establish the extent to which existing law conforms to the implications of the economic model. On the other hand, the basic idea of normative economic analysis by connecting the existing laws with the economic model.

Economic analysis of tort law deals with evolving economic models that are designed in a way to incentivize the injurers and the victims through internalizing the externalities created as a result of their activities. In case of absence of a proper model of tort liability, the potential tortfeasors would bear the private cost of their precaution with reaping the benefits it could get by internalisation thereof. The benefits (of precaution) are external with respect to the decision (on how much precaution). This would lead to suboptimal levels of care and excessive accident rates. Tort liability enables a potential tortfeasor to reduce the expected liability by internalizing the benefits of the precaution taken by him/her. It is therefore important to note that the rules pertaining to tort law should be designed in such a manner that people take optimal level of precaution and also internalize the external cost. With respect to risk, the tort law system should ensure the existence of an appropriate system to allocate risks between the victim and the injurer.

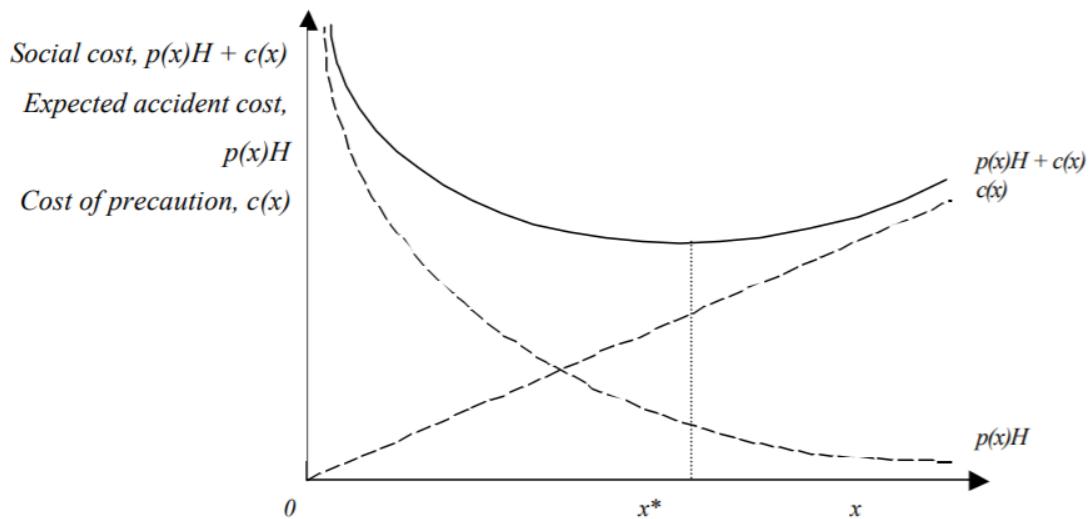
¹⁰ Jules L. Coleman, The Structure of Tort Law, 97 YALE L.J. 1233 1987-1988.

The aim of the tort law system should be to reduce the administrative cost (like cost incurred w.r.t. courts and lawyers) to the lowest.

ECONOMIC MODEL OF TORT LAW

The simple economic model includes two utility-maximising, risk-neutral and perfectly informed agents: the injurer and the victim. The injurer acts and decides how much precaution to take and thus, play an active role whereas the victim on the other hand acts passively. The probability of having an accident depends on the decision of the injurer and the harm suffered is denoted by H.

FIGURE 3- The basic model¹¹



On the horizontal axis is measured the level of precaution, x , and on the vertical axis is measured the costs associated with each level of precaution. The line denoted as $c(x)$ shows the cost for the injurer. The more precaution is taken by the injurer, the more he spends. The curve denoted as $p(x)H$ shows the cost for the victim of an accident. The accident due to which the victim suffers harm is looked at ex-ante, and the ex-ante measure of the cost of the accident is

¹¹Dari-Mattiacci, Giuseppe, Tort Law and Economics (Feb 11, 2003). Utrecht University Working Paper. <https://ssrn.com/abstract=347801>.

denoted as ‘expected accident cost’. The expected accident cost is given by the probability of an accident occurring i.e. $p(x)$, multiplied with the magnitude of the harm, H .

If the injurer does not take enough precaution a harm H will take place with probability $p(x)$. The more precaution the injurer takes, the less probable is the accident, as shown in figure 3. So, the benefit of the injurer’s decision about the level of precaution consists of a reduction in the expected accident cost, and is gained by the victim. What is the best outcome for the injurer? His cost increases as the level of precaution increases. He will spend the smallest amount of money if he takes no precaution at all. This will result in a highly probable accident for the victim. What is the best outcome for the victim? The victim would prefer the injurer to take as much precaution as possible in order to lower the probability of having an accident nearly to zero. This will result in an extremely high cost of precaution for the injurer.

The main question that arises is which is the most efficient solution: no precaution, full precaution or something in between. To answer this question, imagine that a physician is choosing a therapy for herself or that the owner of a chemical plant is also the owner of the farm nearby. Which level of precaution will he choose? In these cases, the same individual bears both the cost of taking precautions and the benefit of taking precaution (a reduction in the expected accident cost). To each level of precaution, x , corresponds a certain cost of precaution and a certain expected accident cost, by adding them together we obtain the total cost that the physician or the owner of the chemical plant have to bear. The best decision is to choose the level of precaution x^* , which corresponds to the lowest total cost. We can conclude that if an individual has to bear the total cost, he will choose the level of precaution x^* , which is indeed something in between the two extremes, no precaution at all and full precaution. Since there is not any other cost involved in this simple model, the sum of the cost of precaution and of the expected accident cost is also equal to the social cost of an accident, that is what society spends in total for an accident; therefore, x^* is the socially optimal level of precaution, because it minimises the sum of the cost of precaution and the expected accident cost and, hence, the social cost. This is the most efficient solution to the problem of how much precaution the injurer should take.

Therefore, the main goal of the tort-law system giving the injurer appropriate incentives to avoid the accident, i.e. internalise the externalities, can be specified as follows: the tort-law system should give the injurer incentives to take the x^* level of precaution. In addition, the tort law systems give parties incentives to acquire information about the accident.

CONCLUSION

Economic theory of tort law emphasizes on two things: to compensate victims and to deter unreasonably dangerous behaviour. It is based on the idea that liability for accidental injuries should be assigned in such a manner that would minimize the estimated cost of accidents which includes the harm suffered by the victim, the administrative cost as well as the cost incurred by the injurers and victims. The economic analysis of tort law is based on the idea that legal rules for assigning liability are designed to minimize the total costs associated with risky activities. Economic approach to tort law acts an important to understand the underlying rationale to the behaviour of law and the legal system.

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