COMMENTS

Recovery of Pure Economic Loss in Product Liability Actions: An Economic Comparison of Three Legal Rules*

I. INTRODUCTION

The term "product liability" usually brings to mind personal injury. When products fail, however, either by reason of design or manufacturing defects, buyers may suffer loss other than personal injury. Whenever a product is used in a money-making venture, the product's failure may lead to economic loss to its owner. For example, assume a buyer purchases a personal computer for use in a business, and the computer breaks down, requiring three days for repair. The out-of-pocket cost of repairing the computer is direct economic loss. Any loss in profits resulting from the breakdown is consequential economic loss. These damages, taken together and in the absence of personal injury or property damage, constitute pure economic loss. The total social cost of accidents caused by product failure, therefore, includes both pure economic loss and personal injury or property damage. Given that pure economic losses exist, the next question is to decide who, between buyer and seller, should bear the cost of those losses.

The Washington Supreme Court has recently considered this question in the context of housing construction. The issue in *Stuart v. Coldwell Banker Commercial Group*[1] was whether the buyer or builder-seller of condominium units should bear the cost of pure economic losses attributable to latent defects in the manufacture of the condominiums. A homeowners association representing owners of the condominiums sued the builder-seller. Among other theories, the suit alleged that the

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* The authors gratefully acknowledge the guidance of Professor Thomas J. Holdych, Professor of Law, University of Puget Sound School of Law, and Professor Bruce Mann, Professor of Economics, University of Puget Sound.

1. 109 Wash. 2d 406, 745 P.2d 1284 (1987).

builder-seller was liable for negligent construction to original and subsequent purchasers. Damages claimed represented only direct economic loss, that is, the cost of repair. In contrast to the trial court, the supreme court refused to recognize a cause of action for negligent construction under the facts presented.[2] The court drew a distinction between economic loss caused by defects of quality such as interior deterioration, which are appropriately governed by contract law, and personal injury or property damage caused by defects that cause accidents involving violence or collision with external objects, which are appropriately governed by tort law.[3] In drawing this distinction, the court analyzed the nature of the defect, the type of risk, and the manner in which the injury arose. It held that the loss in question was economic and, therefore, not appropriately remedied by an action in tort for negligent construction.[4] Two dissenting justices rejected the distinction drawn in the majority opinion between economic loss and personal injury or property damage, arguing that when negligence causes a latent and dangerously defective condition, the buyer should have an action for damages in tort even though the buyer suffered only economic loss.[5]

The *Stuart* decision is not inconsistent with the Tort Reform Act of 1981[6] but is contrary to the court's prior decision in *Berg v. General Motors Corp.*[7] Thus, the court allowed lost profits to a commercial buyer when a product he purchased to use in his business failed because of the manufacturer's negligence. The court in *Stuart* distinguished *Berg* on the ground that the plaintiff claimed lost profits in addition to cost of repair, whereas in *Stuart* only cost of repair was claimed, and the only injury was to the product itself. In both cases, however, the court was dealing with actions in tort in which the plaintiffs were claiming pure economic loss. These recent developments in the case law and statutes emphasize the need to compare how well each of three major legal

2. *Stuart*, 109 Wash. 2d at 422, 745 P.2d at 1292.

3. According to the court, this distinction derives from the "safety-insurance policy of tort law" and the "expectation-bargain protection policy of warranty law. . . ." *Id.* at 421, 745 P.2d at 1293.

4. *Id.* at 420-22, 745 P.2d at 1291-92.

5. *Id.* at 425, 745 P.2d at 1294.

6. 1981 WASH. LAWS ch. 27.

7. 87 Wash. 2d 584, 555 P.2d 818 (1976).

rules—negligence, strict liability, and the Uniform Commercial Code—allocate economic loss in terms of economic efficiency.

This Comment argues that in the allocation of pure economic loss caused by product failure, the negligence rule is generally more efficient than a strict liability rule and that a contract rule is almost always more efficient than a negligence rule. Part II presents a general discussion of the attributes of an economically efficient remedy. In Part III, three legal rules used to allocate pure economic loss are scrutinized under the standards set forth in Part II.

II. ATTRIBUTES OF AN EFFICIENT REMEDY

Before examining the attributes of an efficient[8] remedy, this Comment will briefly survey the economic explanations for tort and contract rules. The tort system can be explained in terms of two economic roles it plays in our society. One role is deterrence: "to control the extent to which people engage in activities which potentially impose costs on others."[9] A second role tort law plays is to allow victims, who are otherwise eligible, to recover damages that adequately reflect their losses.[10] Although the assignment of liability for damages may have no influence on how resources are allocated if transaction costs are zero,[11]

> [t]he need for much of tort law arises from the existence of transactions costs. Often such costs are so high that no real (that is, negotiated) contract is possible at all, and yet individuals, if they could overcome these barriers, would make mutually advantageous bargains. Here the state comes to the aid of these individuals. It writes into law the terms they would have agreed to if they could have bargained.[12]

8. In the following discussion, the concept of "efficiency" is employed to describe the use of resources in capacities in which their value is maximized. Value is measured by the buyer's willingness to pay. W. HIRSCH, LAW AND ECONOMICS: AN INTRODUCTORY ANALYSIS 8 (1979) [hereinafter HIRSCH]; R. POSNER, ECONOMIC ANALYSIS OF LAW 9 (3d ed. 1986) [hereinafter POSNER].

9. R. BOWLES, LAW AND THE ECONOMY 107 (1982) [hereinafter BOWLES].

10. *Id.*

11. Coase, *The Problem of Social Cost*, 3 J. L. & ECON. 1 (1960), *cited in* BOWLES, *supra* note 9, at 109.

12. Bishop, *The Contract-Tort Boundary and the Economics of Insurance*, 12 J. LEGAL STUD. 241, 242 (1983) [hereinafter Bishop] (citing Demsetz, *When Does the Rule of Liability Matter?*, 1 J. LEGAL STUD. 13 (1972)). Transaction costs include "the costs of identifying the parties with whom one has to bargain, the costs of getting together with them, the costs of the bargaining process itself, and the costs of enforcing any

Consequently, the adequacy of a tort rule in dealing with an injury should be determined by comparing it to the hypothetical rule to which the parties would have agreed if they could have bargained.

In contract law, damage measures may act as a substitute for complete contingent contracts.[13] In theory, parties to a contract could bargain for every possible contingency. Damage measures are needed, however, because the cost of bargaining over every contingency is too high and because the occurrence of some contingencies may be difficult or impossible to verify.[14] When a party contemplating breach is forced to take into account the loss to the other party, "the payment of damages for breach of contract tends to promote . . . efficient breach behavior."[15] Although there is no perfect damage measure,[16] commentators suggest that when both parties are risk-neutral[17] the expectation or benefit of the bargain measure performs more efficiently than the reliance or out-of-pocket measure.[18]

The traditional limitations on recovery of consequential loss in contract also have an economic rationale. The mitigation doctrine protects against inefficient action by a nonbreaching party that would aggravate the loss by encouraging the redirection of resources formerly tied to the contract to other uses.[19] The rule of consequential damages, which limits recovery to loss of which the seller at the time of contracting had

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bargain reached." A. POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 12 (1983) [hereinafter POLINSKY].

13. Shavell, *Damage Measures for Breach of Contract*, 11 BELL. J. ECON. 466, 468 (1980) [hereinafter Shavell].

14. *Id.* at 468-69.

15. *Id.* at 472. The goal is "Pareto efficient breach behavior," in which parties will breach as long as the breach makes someone better off without making someone else correspondingly worse off. *See* POLINSKY, *supra* note 12, at 7 n.4.

16. Shavell, *supra* note 13, at 472 ("There does not exist a damage measure which leads to Pareto efficient decisions concerning both breach and reliance independent of the type of contractual situation; in other words, there is no damage measure which acts as a perfect substitute for complete contingent contracts.").

17. "Risk neutral" means indifference between a risky opportunity and receiving with certainty the expected value of that risk opportunity. Kornhauser, *An Introduction to the Economic Analysis of Contract Remedies*, 57 U. COLO. L. REV. 683, 688 (1986) [hereinafter Kornhauser].

18. *Id.* at 710; Shavell, *supra* note 13, at 472.

19. Bishop, *supra* note 12, at 247, 251, 264. Professor Bishop terms the problem addressed by the mitigation doctrine as "moral hazard 2." *See also* HIRSCH, *supra* note 8, at 106.

reason to know,[20] comes from *Hadley v. Baxendale*,[21] and encourages efficient transfers of information.[22] This contract foreseeability rule

> induces the party with knowledge of the risk either to take appropriate precautions himself or, if he believes that the other party might be the more efficient preventer or spreader (insurer) of the loss, to reveal the risk to that party and pay him to assume it. Incentives are thus created to allocate the risk in the most efficient manner.[23]

Commentators are not in complete agreement that the *Hadley* rule is better than other rules, but they do agree that the foreseeability requirement is more efficient than a rule allowing unforeseen damages.[24] A rule allowing recovery of unforeseen damages in contract is inefficient because it creates adverse selection[25] problems. Buyers with higher than average costs will not reveal those costs as potential losses when they enter a contract, so sellers will act as though their potential losses are lower than they actually are, thereby entering into some contracts when they should not.[26] "[O]ptimal decisions will only be made if a decisionmaker must take into account the full consequences of her decision."[27]

With the economic explanations for tort and contract rules in mind, we can now examine the attributes of an efficient

20. *See* E. FARNSWORTH, CONTRACTS 841 (1982); WASH. REV. CODE § 62A.2-715(2)(a) (1987).

21. 9 Ex. 341, 156 Eng. Rep. 145 (1854).

22. Bishop, *supra* note 12, at 255.

23. POSNER, *supra* note 8, at 114 (footnote omitted). For determining the cheaper insurer Posner suggests dividing the cost of insurance into two categories. First are measurement costs, which consist of estimating the probability of the risk and the expected magnitude. Second are the transaction costs, which include the cost of pooling the risk with others to reduce or eliminate it. *Id.* at 93.

24. *Compare* Barton, *The Economic Basis of Damages for Breach of Contract*, 1 J. LEGAL STUD. 277, 296 (1972) ("[T]he rule of *Hadley v. Baxendale* is economically correct in its reliance upon notice and information. Such notice is the only way that economic optima can be achieved, since the negotiation itself cannot serve as a mechanism for transmitting information with respect to the magnitude of the risk to be transferred.") *with* Perloff, *Breach of Contract and the Foreseeability Doctrine of Hadley v. Baxendale*, 10 J. LEGAL STUD. 39, 61-62 (1981) (when both parties are risk neutral, several rules lead to an efficient outcome) *and* Kornhauser, *supra* note 17, at 719.

25. "Adverse selection" means that, because the price of insurance is based on the average risk of insurance buyers, high risk buyers are more likely to buy insurance. Bishop, *supra* note 12, at 246.

26. Kornhauser, *supra* note 17, at 719.

27. *Id.*

remedy. Economists view an efficient legal rule as one that induces people to behave in such a way that no one can be made better off without making someone else worse off.[28] Such a rule is Pareto efficient. Pareto efficient remedies reallocate resources to reflect the resource allocations that would exist if people behaved in an efficient manner. Therefore, when evaluating any legal remedy, one should ask: "Will imposing liability create incentives for value-maximizing conduct in the future?"[29]

An efficient legal remedy has three components. First, it will create incentives for the relevant individuals or firms to behave efficiently. Behavioral incentives include both incentives to take the proper amount of care and incentives to engage in the proper level of activity.[30] Second, an efficient legal remedy will efficiently allocate risk among the firms and individuals.[31] Efficiently allocating risk means placing the risk on the least risk averse person[32] or according to the parties' relative aversion to risk. For simplicity, we will assume that all parties are risk neutral, so efficient risk allocation will not play an important role in the following discussion. Nevertheless, the effect of efficient risk allocation should be borne in mind when the risk preferences of parties to a transaction are known. Third, an efficient legal remedy will minimize litigation and administrative costs.

Whether one remedy is more efficient than another will be affected by asymmetric information and positive costs to transfer that information. An efficient rule creates incentives to transfer information when transfer costs, such as the cost for the parties to meet and negotiate, are low. When the costs of meeting and negotiating are high, tort rules such as negligence and strict liability should operate as substitutes for the bargaining process. Finally, under strict liability, insurance problems such as moral hazard[33] and adverse selection[34] will play a role in evaluating efficiency. The following section presents three legal rules under which pure economic loss may

28. *See id.* at 688-89.

29. POSNER, *supra* note 8, at 85.

30. POLINSKY, *supra* note 12, at 15-21.

31. *Id.*

32. *Id.* at 119.

33. "Moral hazard" means the fact of having insurance creates incentives for an insured to be less careful. *See* POSNER, *supra* note 8, at 150.

34. *See supra* note 25.

be recoverable and evaluates these rules under the foregoing economic principles.

III. Legal Rules Allocating Pure Economic Loss

In 1981, the Washington Legislature resolved the question of whether pure economic loss is recoverable in tort or contract. The resolution was bold and simple. The Tort Reform Act of 1981 defines a product liability claim to include any claim brought for harm caused by the manufacture of a product, including any claim previously based on strict liability in tort, negligence, and breach of express or implied warranty.[35] The Act then defines "harm" to include "any damage recognized by the courts of this state: *Provided*, That the term 'harm' does not include direct or consequential economic loss under Title 62A RCW."[36] Finally, in defining the scope of its provisions, the Act provides that "nothing in this chapter shall prevent the recovery of direct or consequential economic loss under Title 62A RCW."[37]

The effect of the Act is not as broad as it appears on first reading. For example, the Act does not exclude all consequential economic loss. The Journal of the Senate makes clear that "[o]ther types of economic harm, such as wage loss, are included in the term harm . . . ."[38] Thus, if a defectively manufactured computer caught fire and burned the purchaser, the purchaser could recover for past lost wages and, presumably, lost future earnings. By analogy, if a defectively manufactured computer caught fire and burned the purchaser's place of business, it follows that he should recover lost profits and injury to goodwill. The Act appears to draw a distinction, however, between direct or consequential economic loss with injury to persons or property, and direct or consequential economic loss without injury. This analysis is consistent with the result reached by the majority in *Stuart*[39] and with the comment of

35. WASH. REV. CODE § 7.72.010(4) (1987).

36. *Id.* § 7.72.010(6).

37. *Id.* § 7.72.020(2).

38. SENATE JOURNAL, 47th Leg., Reg. Sess. 630 (1981).

39. 109 Wash. 2d at 420, 745 P.2d at 1291. The reasoning in the case, however, casts a shadow of confusion over how the definition of "harm" in the Act ought to be construed. In drawing the distinction between economic loss (recoverable only in contract) and physical damage (recoverable in tort), the court emphasized that "the determinative factor should not be the items for which damages are sought, such as repair costs." *Id.* Instead, the nature of the defect, the type of risk, and the manner in which the injury arose are determinative. In contrast, the Act appears to rely on the

one legislator that the Act "is confined to physical harm to persons and property and leaves economic loss, standing alone, to the U.C.C."[40]

Nevertheless, the Act has significant impact on Washington law. It essentially overrules *Berg* and adopts the position that a buyer's disappointed expectations are protected by the Uniform Commercial Code, and that the law of product liability does not afford a remedy for pure economic loss.[41] Accordingly, when a buyer buys a defectively manufactured computer that fails to perform as he expected and causes injury to the buyer's business, the buyer cannot recover in either negligence or strict liability for the cost of repair, lost profits, or damages for injury to goodwill. The buyer must seek his remedy under the Uniform Commercial Code. As one legislator observed, "[t]he parties could appropriately contract in the commercial setting on those issues."[42] The following section first analyzes the two tort rules rejected by the Tort Reform Act of 1981. It then analyzes the remedies provided by the Uniform Commercial Code as the preferred remedies in Washington for compensating pure economic loss.

A. Tort

The law of torts adjusts the losses arising from human activities and affords compensation for injuries sustained by one person caused by the conduct of another.[43] Damages awarded are of three general types: compensatory, nominal, and punitive.[44] We will discuss only compensatory damages. When a person suffers only economic harm, compensatory damages are intended to place him in a position substantially equivalent to that which he would have occupied had there been no tort committed.[45] This rule maintains the earlier income distribution of the parties.[46]

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definitions of direct and consequential loss found in WASH. REV. CODE § § 62A.2-714 (2) & -715(2) (1987). Until the court directly faces this issue under the Act, the meaning of "harm" may be unclear.

40. Talmadge, *Tort and Product Liability Reform*, 5 U. PUGET SOUND L. REV. 1, 10 (1981) [hereinafter Talmadge].

41. *Id.* at 10.

42. *Id.*

43. W. PROSSER & W. KEETON, THE LAW OF TORTS 6 (5th ed. 1984).

44. Punitive damages are not recoverable in tort under Washington law. Kammerer v. Western Gear, 96 Wash. 2d 416, 635 P.2d 708 (1981).

45. RESTATEMENT (SECOND) OF TORTS § 903 comment a (1977).

46. HIRSH, *supra* note 8, at 153.

Damages recoverable in tort are subject to the limitations of certainty, mitigation, and foreseeability or proximate cause. The limitations of certainty of proof and the duty to mitigate are similar in tort and contract, but the foreseeability limitation differs. Unlike contract damages, tort damages are not limited to those that the tortfeasor had reason to know when the tort occurred. Although it is necessary to establish that the tortfeasor's conduct poses a foreseeable risk to the victim, it is not necessary that the tortfeasor foresee the particular harm that occurred. If the victim was in the foreseeable scope of danger posed by the tortfeasor's conduct, the tortfeasor may be liable for all harm for which his conduct was a substantial factor in bringing to pass.[47] Tort law provides two remedial schemes, subject to the foregoing limitations, applicable when a victim suffers pure economic loss: negligence and strict liability.

1. Negligence

In order for a party to recover in negligence he must show that 1) the defendant owed him a duty of care; 2) the defendant breached that duty of care; and 3) the defendant's breach resulted in damage to the other party.

The common law has incorporated a form of cost-benefit analysis to determine whether a defendant has breached the duty of care. According to Judge Learned Hand,[48] an injurer is negligent if $B < PL$, where B is the cost of taking precautions to avoid the loss, P is the probability that the accident will occur, and L is the magnitude of the loss if the accident actually occurs. PL can be described as the expected accident cost. When $B > PL$, an injurer should not be held liable in negligence because the additional benefit (in terms of accident prevention) from taking more care is less than the cost of taking the additional care. The Learned Hand formula is illustrated in Figure 1.[49] The PL curve shows the marginal change in expected accident costs as more care is used; the B curve shows the marginal costs of care.[50] The intersection of the B and PL curves at c* represents due care. Application of these princi-

47. Fleming v. Seattle, 45 Wash. 2d 477, 275 P.2d 904 (1954).

48. United States v. Carroll Towing Co., 159 F.2d 169, 173, *reh'g denied*, 160 F.2d 482 (2d Cir. 1947).

49. POSNER, *supra* note 8, at 149.

50. *Id.* The PL curve has a negative slope on the assumption that additional units of care will be gradually less effective in preventing accidents. The B curve has a

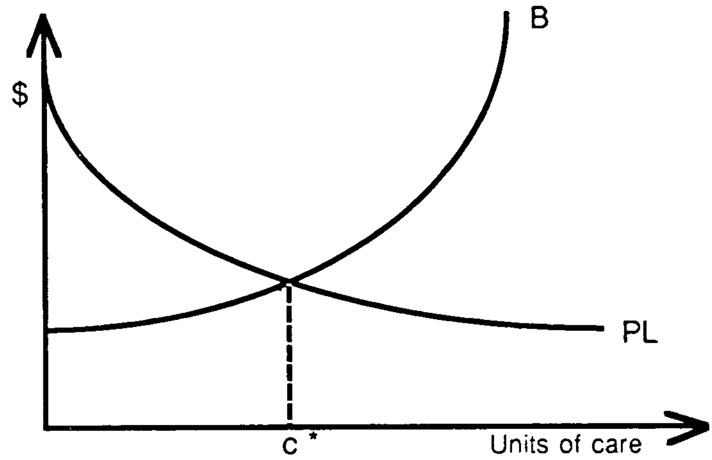

Figure 1. Learned Hand's Negligence Formula

ples to cases involving pure economic loss has led to a split in authority, exemplified by the following discussion of two cases allocating pure economic loss representing lost profits caused by the failure of engines on commercial seagoing vessels.

A majority of courts reject claims in negligence for economic loss when the only physical injury alleged is to the product itself.[51] The United States Supreme Court recently adopted the majority view with respect to admiralty actions in *East River Steamship Corp. v. Transamerica Delaval, Inc.*[52] In that case, a shipbuilder contracted with Transamerica Delaval to design, manufacture, and supervise the installation of turbines to power four supertankers. The shipbuilder then gave East River Steamship a charter on one of the finished vessels.

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positive slope on the assumption that inputs of care are scarce and cost more as they are purchased by manufacturers.

51. *See, e.g.*, East River Steamship Corp. v. Transamerica Delaval, Inc., 476 U.S. 858 (1986); Noel Transfer & Package Delivery Service, Inc. v. General Motors Corp., 341 F. Supp. 968 (D. Minn. 1972); Stuart v. Coldwell Banker, 109 Wash. 2d 406, 745 P.2d 1284 (1987). *See also* Arrow Leasing Corp. v. Cummins Arizona Diesel, Inc., 136 Ariz. 444, 666 P.2d 544 (1983); Anthony v. Kelsey-Hayes Co., 25 Cal. App. 3d 442, 102 Cal. Rptr. 113 (1972); Long v. Jim Letts Oldsmobile, Inc., 135 Ga. App. 293, 217 S.E.2d 602 (1975); Clark v. International Harvester Co., 99 Idaho 326, 581 P.2d 784 (1978); Moorman Mfg. Co. v. National Tank Co., 91 Ill. 2d 69, 435 N.E.2d 443 (1982); Alfred N. Koplin & Co., Inc. v. Chrysler Corp., 49 Ill. App. 3d 194, 364 N.E.2d 100 (1977); Superwood Corp. v. Siempelkamp Corp., 311 N.W.2d 159 (Minn. 1981); National Crane Corp. v. Ohio Steel Tube Co., 213 Neb. 782, 332 N.W.2d 39 (1983); Trans World Airlines v. Curtiss-Wright Corp., 1 Misc. 2d 477, 148 N.Y.S.2d 284 (N.Y. Sup. Ct. 1955); Inglis v. American Motors Corp., 3 Ohio St. 2d 132, 209 N.E.2d 583 (1965).

52. 476 U.S. 858 (1986).

The vessel developed turbine damage. East River Steamship sued Transamerica Delaval in negligence and strict liability, seeking damages for cost of repair and lost income.

The Court presented three reasons for rejecting East River Steamship's claim. First, consequential economic loss caused by the failure of a product is more insurable by buyers than loss caused by personal injury; therefore, the increased cost of the product would not be justified.[53] Second, parties should be free to allocate risks among themselves without the intrusion of tort liability.[54] Third, warranty law contains an adequate remedy with necessary limitations on liability, that is, privity and remoteness, while liability in tort could subject manufacturers to damages in an indefinite amount.[55]

A few courts have adopted the opposite view, that consequential economic loss is recoverable in negligence even when the only physical injury alleged was to the product itself.[56] In *Berg v. General Motors Corp.*,[57] a pre-tort reform case, the Washington Supreme Court allowed recovery of consequential economic loss in negligence. In that case, Berg, a commercial fisherman, purchased a General Motor's marine engine from a dealer. The dealer installed the engine in Berg's commercial fishing vessel. The engine broke down during the fishing season. Berg sued the dealer and General Motors in negligence, seeking damages based on the anticipated value of the fish that he would have caught had the vessel not been laid up in repairs.

The court gave four reasons for its decision to allow recovery. First, recovery in negligence would not increase a manufacturer's exposure to lawsuits because the manufacturer would be liable in warranty in any event.[58] Second, the distinction between products that destroy themselves and cause consequential economic loss (consequential damages not recoverable in negligence), and products that destroy themselves as well as other property and cause consequential eco-

53. *Id.* at 871-72.

54. *Id.* at 873.

55. *Id.* at 872-75.

56. *See, e.g.*, Berg v. General Motors Corp., 87 Wash. 2d 584, 555 P.2d 818 (1976). *See also* State *ex rel.* Western Seed Prod. Corp. v. Campbell, 250 Or. 262, 442 P.2d 215 (1968), *cert. denied*, 393 U.S. 1093 (1969); Nobility Homes of Texas, Inc. v. Shivers, 557 S.W.2d 77 (Tex. 1977); W.R.H., Inc. v. Economy Builders Supply, 633 P.2d 42 (Utah 1976).

57. 87 Wash. 2d 584, 555 P.2d 818 (1976).

58. *Id.* at 591-92, 555 P.2d at 822.

nomic loss (consequential damages recoverable in negligence) is unsound.[59] Third, when a manufacturer foresees that its product will eventually be purchased by someone using the product commercially, the manufacturer owes the purchaser a duty not to impair the purchaser's business with a faulty product.[60] Fourth, there is no substantive basis in the law of negligence for denying a purchaser lost profits in a suit against a remote manufacturer.[61]

Thus, *East River Steamship* and *Berg* illustrate the two views on the recovery of pure economic loss in negligence when the only physical injury alleged is to the product itself. Each court reaches its conclusion by rejecting the assumptions of the other concerning the ability of the manufacturer to estimate the risk of consequential economic loss, the extent of exposure that liability in tort creates, and the desirability of charging the manufacturer with liability in tort for the satisfactory performance of its products in a purchaser's business. The divergent views expressed in these two cases raise the question of which view is most consistent with the hypothetical efficient remedy to which the tortfeasor and victim would have agreed.

To allow a buyer to recover pure economic loss in negligence means a manufacturer will only be liable if he exercises less care than is cost-effective. If the manufacturer is liable only for losses connected with personal injury or property damage (including lost earnings), his expected accident cost, PL, will be lower than if he is also liable for pure economic losses. Consequently, the manufacturer's level of care will not reflect the likelihood of his product's failure causing pure economic loss. The resulting failure of the manufacturer to take reasonable care to prevent pure economic loss results in an inefficient allocation of resources because the buyer will have to exercise additional care that could be exercised more cheaply by the manufacturer.

If the expected accident cost is higher because it includes pure economic loss, a negligence rule will cause the manufacturer to spend more to prevent accidents. Using the Hand diagram in Figure 2, PL will shift upward because L, the amount of loss, is higher. Although expected accident costs (PL)

59. *Id.* at 592, 555 P.2d at 822.
60. *Id.* at 592-93, 555 P.2d at 822-23.
61. *Id.* at 593, 555 P.2d at 823.

increase, the marginal cost of prevention, the B curve, does not. The B curve will shift upward only when the technology of caretaking, or when the price of inputs for caretaking, becomes more expensive. The new optimal level of care will be C_2, the intersection of B and PL_2. It follows that when PL includes the probability and magnitude of pure economic loss and personal injury, the manufacturer will exercise an efficient level of care.

If the manufacturer is using an efficient level of care, the buyer will bear the risk of pure economic loss that arises from product failure despite manufacturer care. Therefore, the buyer will be induced to exercise an efficient level of care to protect from losses not covered by the manufacturer's exercise of care. If the buyer exercised more than the efficient or cost-effective level of care, his costs for the additional care would exceed the cost of the accidents that the additional care would prevent. If the buyer exercised less than the efficient or cost-effective level of care, his costs for repairs would exceed the cost of care that would prevent the accidents. Whether the buyer will use more care when pure economic losses can be recovered in negligence than when only personal injury and related losses can be recovered in negligence depends, however, on whether the buyer has an available remedy for those same losses in contract.

The level of care exercised by manufacturers affects their

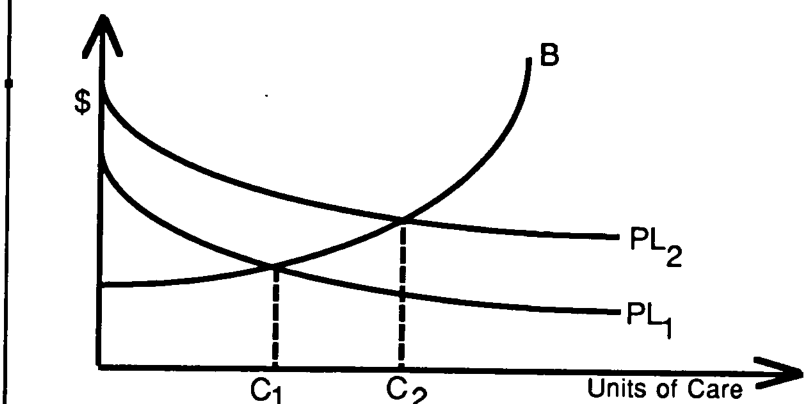

Figure 2. Effect on the Level of Care of Allowing Recovery for Pure Economic Loss in Negligence.

marginal costs[62] and, therefore, their level of output. If PL includes the probability and magnitude of pure economic loss, then as a result of the manufacturer's higher costs (in terms of optimal accident deterrence), the manufacturer's marginal costs will be higher than if recovery of pure economic loss is not allowed. The industry supply curve will shift inwards because each additional unit of output will be more expensive to produce, leading to a decrease in output of the product. Because price at the lower level of output will be higher, the quantity demanded will decrease. However, market demand may increase if the manufacturer's liability matches the value of the contract to the buyer. Thus, the overall level of the manufacturer's activity with respect to output may change either in the positive or negative direction. Without recovery of pure economic loss, the risk of loss would be on the buyer, who in a world of perfect information would take the risk into account as part of the true cost of the product and demand the efficient amount of the product. Interestingly, in terms of supply and demand, allowance and disallowance of recovery for pure economic loss leads to the same result. The reason for this result is probably that the law of negligence, including the rule of comparative fault, imposes reciprocal duties of reasonable care on the buyer and seller.

The level of care a buyer exercises will affect his intensity of use of the product. A buyer's ability to use a product with more or less intensity will affect his utility of, and therefore, his demand for, the product. As shown in Figure 3, demand will be greatest if the legal rule allows the buyer to use the product with high-intensity, compared to moderate or low-intensity. Under a legal rule allowing a buyer to recover pure economic loss from a manufacturer, the buyer would receive added utility from a higher use, and the demand curve will shift upward. In negligence, the buyer would not be likely to make maximum use of the product, however, because his comparative fault may reduce his recovery. A buyer who keeps his computer running 24 hours a day is more likely to be found partially at fault for causing a loss due to product failure than someone who used the same computer only during business hours. Therefore, a negligence rule probably results in a market demand for moderate use, represented by D_{mod} in Figure 3,

62. Marginal cost is the change in total costs caused by a one-unit change in output. POSNER, *supra* note 8, at 8.

and creates incentives for buyers to use the product at a cost-effective activity level.

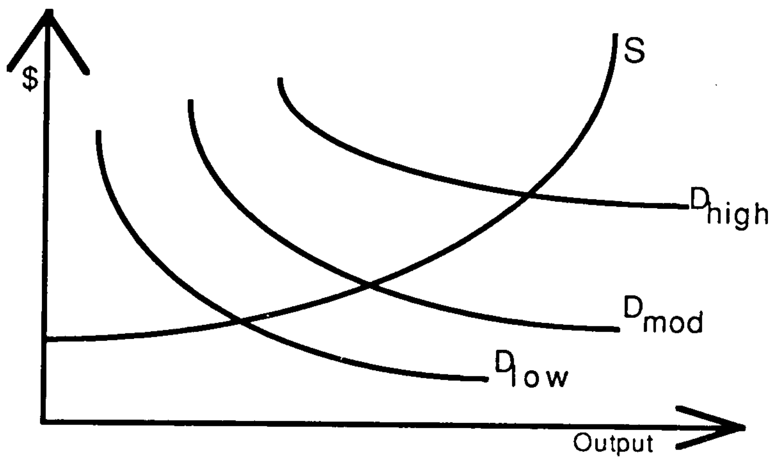

Figure 3. Relationship of Demand to Intensity of Use.

Thus, given care and activity level incentives, if PL can be accurately determined, negligence is an efficient way to compensate a buyer for pure economic loss. However, for consequential losses in general, manufacturers often cannot accurately determine PL, or if they can, the information costs are high. The buyer has a much better idea of how great his economic losses are likely to be. Transferring this information is costly. This asymmetric information problem may cause the manufacturer to take more or less care than he would need to take if he could accurately estimate the buyer's economic loss in the event of product failure, which will lead to a misallocation of resources. To the extent that the manufacturer cannot cheaply and accurately estimate the appropriate level of care, he has an incentive to seek insurance or a waiver of negligence liability. Consequently, if the buyer can self-insure, allowing recovery of consequential economic loss from the manufacturer is not Pareto efficient.

2. Strict Liability

Strict liability means a tortfeasor is liable for the victim's damages even if, in Learned Hand's terms, $B < PL$.[63] Unlike a negligence rule, strict liability reduces accident costs by inducing changes in the activity level, as illustrated by Figure 4.[64] MC_p is the industry's private marginal cost curve. MC_s is the industry's social marginal cost curve because it includes the cost of accidents. Under strict liability, the industry will perceive its cost curve as MC_s and reduce output from q_o to q^*. This reduction in output eliminates the social accident costs, represented by the shaded area. When changes in activity levels by potential injurers are the most efficient way to prevent accidents, strict liability is appropriate.[65]

As was the case in negligence, the majority of courts refuse to award consequential economic loss in strict liability when the only physical injury alleged is to the product itself.[66] The commentators are generally in accord with the majority view.[67] The case most often cited in support of this view is

63. *Id.* at 160.

64. *Id.* at 162.

65. *Id.* at 163.

66. For an excellent discussion of the position taken by the majority of American courts, see Jones & Laughlin Steel Corp. v. Johns-Manville Sales Corp., 626 F.2d 280 (3d Cir. 1980). *See also* Purvis v. Consolidated Energy Prods. Co., 674 F.2d 217 (4th Cir. 1982); Posttape Assocs. v. Eastman Kodak Co., 537 F.2d 751 (3d Cir. 1976) (Pennsylvania law); Fredonia Broadcasting Corp. v. RCA Corp., 481 F.2d (5th Cir. 1973) (Texas law); Southwest Forest Indus., Inc. v. Westinghouse Elec. Corp., 422 F.2d 1013 (9th Cir.) (Arizona law), *cert. denied*, 400 U.S. 902 (1970); Arizona v. Cook Paint & Varnish Co., 391 F. Supp. 962 (D.Ariz. 1975) (under laws of Arizona, California, Hawaii, Texas, and Alaska), *aff'd*, 541 F.2d 226 (9th Cir. 1976), *cert. denied*, 430 U.S. 915 (1977); Midland Forge, Inc. v. Letts Indus., Inc., 395 F. Supp. 506 (N.D. Iowa 1975); Iowa Elec. Light & Power Co. v. Allis-Chalmers Mfg. Co., 360 F. Supp. 25 (S.D. Iowa 1973); Cooley v. Salopian Indus., Ltd., 383 F. Supp. 1114 (D.S.C. 1974) (South Carolina law); Morrow v. New Moon Homes, Inc., 548 P.2d 279 (Alaska 1976); Arrow Leasing Corp. v. Cummins Ariz. Diesel, Inc., 136 Ariz. 444, 666 P.2d 544 (1983); Beauchamp v. Wilson, 21 Ariz. App. 14, 515 P.2d 41 (1973); Seely v. White Motor Co., 63 Cal. 2d 9, 403 P.2d 145, 45 Cal. Rptr. 17 (1965); Hiigel v. General Motors Corp., 190 Colo. 57, 544 P.2d 983 (1975); Chrysler Corp. v. Taylor, 141 Ga. App. 671, 234 S.E.2d 123 (1977); Moorman Mfg. Co. v. National Tank Co., 91 Ill. 2d 69, 435 N.E.2d 443 (1982); Cline v. Prowler Indus. of Md., Inc., 418 A.2d 968 (Del. 1980); Sharp Bros. Contracting Co. v. American Hoist & Derrick Co., 703 S.W.2d 901 (Mo. 1986); Hawkins Constr. Co. v. Mathews Co., 190 Neb. 546, 209 N.W.2d 643 (1973); Cayuga Harvester v. Allis-Chalmers Corp., 95 A.D.2d 5, 465 N.Y.S.2d 443 (1983); Hagert v. Hatton Commodities, Inc., 350 N.W.2d 591 (N.D. 1984); Price v. Gatlin, 241 Or. 315, 405 P.2d 502 (1965); Industrial Uniform Rental Co. v. International Harvester Co., 317 Pa. Super. 65, 463 A.2d 1085 (1983); Nobility Homes of Texas, Inc. v. Shivers, 557 S.W.2d 77 (Tex. 1977); Star Furniture Co. v. Pulaski Furniture Co., 297 S.E.2d 854 (W. Va. 1982).

67. *See generally* J. WHITE & R. SUMMERS, HANDBOOK OF THE LAW UNDER THE UNIFORM COMMERCIAL CODE 418 (2d ed. 1980); Franklin, *When Worlds Collide: Liability Theories and Disclaimers in Defective-Product Cases*, 18 STAN. L. REV. 974, 989-90 (1966); Speidel, *Products Liability, Economic Loss and the U.C.C.*, 40 TENN. L.

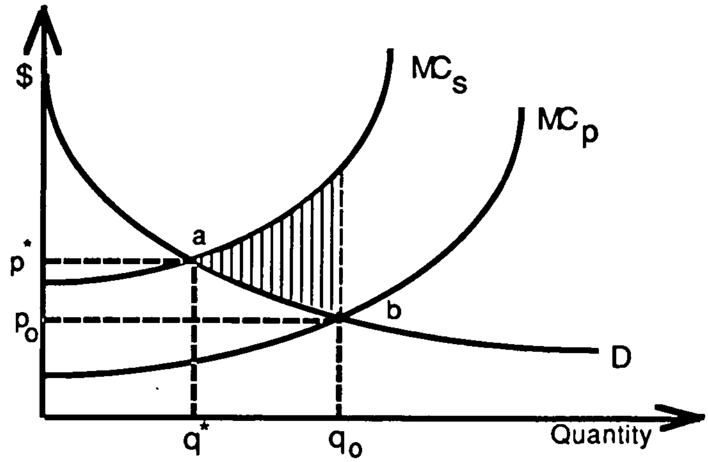

Figure 4. Effect on Industry Output of Strict Liability

Seely v. White Motor Co.[68] Seely, through a dealer, bought a truck manufactured by White Motor Co. He bought the truck for use in his business of heavy-duty hauling. The truck had numerous mechanical problems, some of which caused an accident that damaged the truck. Seely sued the dealer and White Motor Co. in strict liability for money paid on the purchase price, cost of repairs, and lost profits in his business. The California Supreme Court held that Seely could not recover consequential economic loss in strict liability and must look to the law of warranty for his remedy. The court explained the distinction between tort recovery for physical injuries and warranty recovery for economic loss as follows:

> The distinction rests, rather, on an understanding of the nature of the responsibility a manufacturer must undertake in distributing his products. He can appropriately be held liable for physical injuries caused by defects by requiring his goods to match a standard of safety defined in terms of con-

REV. 309, 316-18, 327 (1973); Wade, *Tort Liability for Products Causing Physical Injury and Article 2 of the U.C.C.*, 48 MO. L. REV. 1, 26 n.87 (1983); Comment, *The Vexing Problem of the Purely Economic Loss in Products Liability: An Injury in Search of a Remedy*, 4 SETON HALL 145, 175 (1972); Note, *Economic Loss in Products Liability Jurisprudence*, 66 COLUM. L. REV. 917, 961, 965 (1966); Note, *Manufacturers' Liability to Remote Purchasers for "Economic Loss" Damages—Tort or Contract?*, 114 U. PA. L. REV. 539, 548-49 (1966). *Cf.* Rapson, *Products Liability Under Parallel Doctrines: Contrasts Between the Uniform Commercial Code and Strict Liability in Tort*, 19 RUTGERS L. REV. 692, 712 (1965), *cited in* Spring Motors Distribs. v. Ford Motor Co., 98 N.J. 555, 575, 489 A.2d 660, 670 (1985).

68. 63 Cal. 2d 9, 403 P.2d 145, 45 Cal. Rptr. 17 (1965).

> ditions that create unreasonable risks of harm. He cannot be held liable for the level of performance of his products in the buyer's business unless he agrees that the product was designed to meet the buyer's demands.[69]

The court stated that if a manufacturer could be held liable for the performance of its product in the business of a purchaser with whom it has not dealt, the manufacturer would be liable for damages of unknown and unlimited scope.[70] The court noted that the risk of personal injury was more insurable by the manufacturer than was the risk of economic loss to the purchaser's business.[71] Finally, the court emphasized the ability of the parties to allocate the risk of consequential economic loss by agreement.[72]

A minority of jurisdictions has allowed recovery in strict liability for pure economic loss.[73] The case most frequently cited for this view is *Santor v. A. and M. Karagheusian*.[74] In that case, a dealer sold Santor a home carpet manufactured by Karaghesian. The carpet arrived with flaws in it. When Santor attempted to contact the dealer, he found that the dealer was out of business. Santor sued Karagheusian under an implied warranty theory for direct economic loss representing the diminished value of the carpet. The court allowed recovery, stating in dictum that recovery under the doctrine of strict liability would also be appropriate.[75] Further, the court noted:

> As we indicated in *Henningsen*, the great mass of the purchasing public has neither adequate knowledge nor sufficient opportunity to determine if articles bought or used are defective. Obviously, they must rely upon the skill, care and reputation of the maker. It must be said, therefore, that when the manufacturer presents his goods to the public for

69. *Id.* at 18, 403 P.2d at 151, 45 Cal. Rptr. at 23.

70. *Id.* at 17, 403 P.2d at 150-51, 45 Cal. Rptr. at 22-23.

71. *Id.* at 18-19, 403 P.2d at 151, 45 Cal. Rptr. at 23.

72. *Id.*

73. *See, e.g.*, Mead Corp. v. Allendale Mutual Ins. Co., 465 F. Supp. 355 (N.D. Ohio 1979); Berkely Pump Co. v. Reed-Joseph Land Co., 279 Ark. 384, 653 S.W.2d 128 (1983) (Arkansas product liability statute); Verdon v. Transamerica Ins. Co., 187 Conn. 363, 446 A.2d 3 (1982) (Connecticut product liability statute); Cova v. Harley Davidson Motor Co., 26 Mich. App. 602, 182 N.W.2d 800 (1970); Santor v. A. and M. Karagheusian, Inc., 44 N.J. 52, 207 A.2d 305 (1965); City of La Crosse v. Schubert, Schroeder & Associates, Inc., 72 Wis. 2d 38, 240 N.W.2d 124 (1976).

74. 44 N.J. 52, 207 A.2d 305 (1965).

75. *Id.* at 63-67, 207 A.2d at 311-13.

> sale he accompanies them with a representation that they are suitable and safe for their intended use.[76]

Although *Santor* dealt only with direct economic loss, it has served as the basis for extending strict liability to cases including consequential economic loss.[77] Nevertheless, the New Jersey Supreme Court has recently limited the scope of the *Santor* ruling. In *Spring Motors Distributors, Inc. v. Ford Motor Co.*,[78] the court held that a commercial buyer seeking damages for only direct and consequential economic loss cannot recover in either negligence or strict liability.[79] Commercial buyers are limited to the protection of the Uniform Commercial Code. The court explained:

> Generally speaking, tort principles, such as negligence, are better suited for resolving claims involving unanticipated physical injury, particularly those arising out of an accident. Contract principles, on the other hand, are generally more appropriate for determining claims for consequential damage that the parties have, or could have, addressed in their agreement.[80]

In sum, there are two positions on recovery of pure economic loss in strict liability. The majority denies recovery on the theory that the loss is more appropriately addressed under the Uniform Commercial Code. A minority allows recovery, arguing that there is no basis for distinction between loss accompanied by personal injury or property damage other than damage to the product and loss as a result of a defective product unaccompanied by personal injury or property damage. A variation of the minority rule allows recovery of pure economic loss in strict liability only to non-commercial buyers. This split in authority again raises the question of which rule is most consistent with the hypothetical efficient remedy to which the tortfeasor and victim would have agreed.

If recovery for pure economic loss is allowed in strict products liability, the manufacturer becomes a market insurer for losses caused by defective manufacture or design. The manufacturer will exercise a cost-effective level of care and buy insurance for losses that cannot be prevented by cost-effective

76. *Id.* at 64-65, 207 A.2d at 311 (citations omitted).
77. *See supra* note 73 and accompanying text.
78. 98 N.J. 555, 489 A.2d 660 (1985).
79. *Id.* at 578, 489 A.2d at 672.
80. *Id.*

measures. If the manufacturer were to spend more on accident prevention than the benefit derived from those expenditures, he would be acting irrationally. He will take precautions only to the point where B = PL, in Hand's terms. The buyer's level of care depends on whether the rule takes into account the buyer's fault. If comparative fault is not considered, then the buyer can recover for all his injuries without assuming the costs associated with taking care. The rule creates no incentives for the buyer to exercise due care. Therefore, if comparative fault is not taken into account in awarding damages under a strict liability rule, the buyer will fail to exercise an efficient level of care. However, if comparative fault is considered, the buyer will take a cost-effective amount of care just as under a negligence rule.[81] Thus, strict liability recovery for pure economic loss creates incentives for efficient buyer behavior in terms of exercising care only when the buyer's comparative fault operates as a check on his award of damages.

In comparison to a negligence rule, the level of the manufacturer's activity or production under strict liability for pure economic losses will decrease because of the added cost of full insurance for losses that cannot be prevented by the exercise of reasonable care. When the buyer is the cheaper insurer, increased costs will force the manufacturer to supply less than the efficient amount of products at any given price. When the manufacturer is the cheaper insurer, however, equilibrium price and quantity will be the same as under a negligence rule because the manufacturer would prefer to offer the insurance himself to increase quantity demanded.

The buyer's activity level, in terms of intensity of use, is likely to be higher under a strict liability rule in jurisdictions that do not consider the buyer's comparative fault than under a negligence rule. Forcing the manufacturer to bear the full cost of insurance gives buyers incentives to exercise a higher level of use in order to gain the added utility high use offers. Market demand will increase as shown in Figure 5 from D_{mod} to D_{high}. The shift in demand will be particularly great among high-intensity users such as commercial buyers. The attraction of high-intensity users to the market creates adverse selection problems because the manufacturer is likely to estimate its costs based on the intensity of use of the average buyer. On the other hand, low-intensity users may select alternatives to

81. POSNER, *supra* note 8, at 156-57.

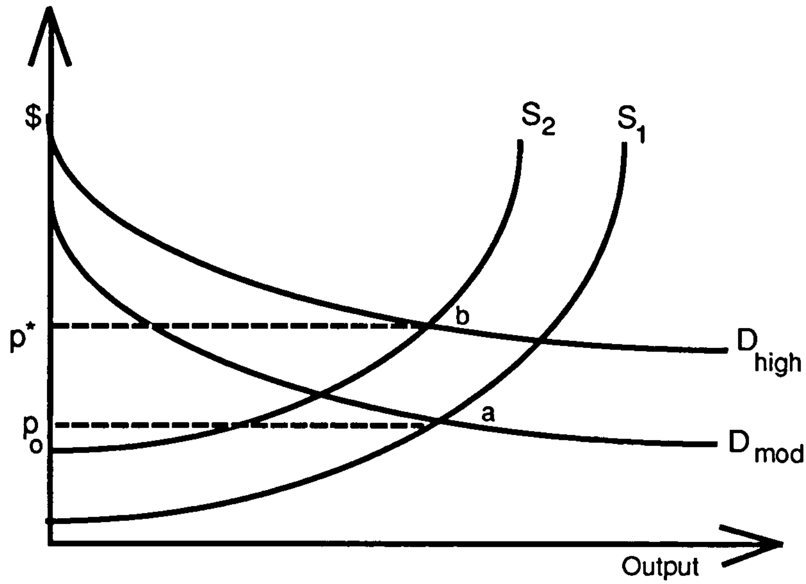

Figure 5. Effect of Strict Liability on Consumer Demand

avoid subsidizing high-intensity users, thereby limiting the upward shift in the demand curve. At the same time, as mentioned before, the industry supply curve will shift upward from S_1 to S_2, if strict liability, rather than negligence, is the legal rule for recovery of pure economic loss. As a result, the equilibrium price will increase. Equilibrium output may be smaller or greater, depending on the magnitude of the shifts and the slopes of the curves. In any event, the added utility of greater intensity of use enjoyed by the buyer will come at the expense of the manufacturer.

With regard to the standard of minimizing litigation and administrative costs, strict liability in tort appears to perform no better or no worse than a negligence rule. Although a strict liability case may be cheaper to prove than a negligence case, this cost saving may be offset by a resulting larger number of strict liability claims, which create higher administrative costs.[82] Both rules require judicial determination of liability and damages.

Either the manufacturer or the buyer can self-insure to cover losses caused by defective products. The strict liability rule for allocation of pure economic loss, however, forces the

82. *Id.* at 164.

manufacturer to provide market insurance. A strict liability rule will be efficient only if market insurance is cheaper than self-insurance. This is unlikely for several reasons. Potential economic losses are widely disparate across the universe of buyers, and buyers have better information about the likelihood and magnitude of their consequential loss. In addition to the asymmetric information problems, market insurance suffers from the problems of adverse selection and moral hazard. High-intensity users, such as commercial buyers, will have a higher level of demand for the product because of the low cost of market insurance compared to self-insurance. All users will exercise less care than they would exercise if they were self-insured and had to pay a deductible before recovering. Self-insurance by buyers avoids adverse selection problems because the insurer can tailor the policy to the insured's particular needs.[83] Also, self-insurance avoids moral hazard problems by requiring that the insured pay a deductible before recovering under the policy.

In sum, allowing recovery for pure economic loss in strict liability is less satisfactory than restricting such recovery to negligence. Asymmetric information, adverse selection, and moral hazard combine to make strict liability an inefficient remedy relative to negligence. If the buyer is forced to self-insure because he cannot recover from the manufacturer, the price reduction to the buyer will be greater than the cost of market insurance. Strict liability poorly approximates the hypothetical remedy to which the parties would have agreed.

Consequently, manufacturers would prefer to disclaim strict liability for consequential economic losses and buyers would prefer to self-insure for such losses. When buyers and sellers can agree to waive strict liability, an efficient result can be achieved. However, to the extent transaction costs exceed the cost of having sellers bear the risk of consequential economic loss, buyers will not bargain for waivers and will be trapped by an inefficient rule. Such a result is likely to occur with the small businessman or one-time purchaser, who enters into fewer transactions on a less frequent basis than very large businesses, or buyers who buy in large volumes. In commercial transactions, the parties have better information and can establish contract terms more efficiently than parties to commercial

83. Priest, *A Theory of the Buyer Product Warranty*, 90 YALE L.J. 1297 (1981) [hereinafter Priest].

transactions. Nevertheless, the marginal buyer can be expected to demand disclaimers of strict liability when buyers can self-insure more cheaply than the manufacturer can provide market insurance.

B. The Uniform Commercial Code

The general measure of damages for breach of warranty under the Code is the buyer's expectation interest, defined as "the difference at the time and place of acceptance between the value of the goods accepted and the value they would have had if they had been as warranted."[84] This measure of damages is analogous to direct economic loss. The Code also allows consequential damages, defined to include "any loss resulting from general or particular requirements of which the seller at the time of contracting had reason to know . . . and injury to person or property proximately resulting from any breach of warranty."[85]

The Code, like tort law, imposes three limitations on the injured party's ability to recover damages for consequential loss. First, the injured party cannot recover damages for loss that he could have avoided if he had taken appropriate steps to do so.[86] Second, the injured party cannot recover damages for loss beyond the amount that he proves with reasonable certainty.[87] Third, the injured party can recover only for loss which the seller at the time of contracting had reason to know.[88] This foreseeability rule differs from the broader rule followed in tort, which allows recovery for consequential losses even though the tortfeasor did not foresee the particular type of harm he caused.[89]

Product liability under the Uniform Commercial Code is founded upon breach of warranty. The Uniform Commercial Code recognizes both express and implied warranties. Express warranties are created when the seller makes an affirmation of fact or promise that relates to the goods, describes the goods, or offers a sample or model that becomes part of the basis of

84. WASH. REV. CODE § 62A.2-714(2) (1987); *see also* WASH. REV. CODE § 62A.1-106(1) (1987) ("aggrieved party may be put in as good a position as if the other party had fully performed . . . .").

85. WASH. REV. CODE § 62A.2-715(2).

86. *Id.* § 62A.2-715(2)(a).

87. *Id.* § 62A.2-715 official comment 4.

88. *Id.* § 62A.2-715(2)(a).

89. *See supra* text accompanying notes 43-46.

the bargain.[90] Implied warranties are of two kinds: merchantability and fitness for a particular purpose. The warranty of merchantability accompanies the goods unless it is excluded or modified.[91] To be merchantable, goods must, among other things, be fit for the ordinary purposes for which they are used.[92] The warranty of fitness for a particular purpose arises when the seller, at the time of contracting, has reason to know of any particular purpose for which the goods are required and of the buyer's reliance on the seller's judgment to furnish suitable goods.[93] This warranty also accompanies the goods unless excluded or modified. Other implied warranties may arise from course of dealing or usage of trade unless excluded or modified.[94]

These warranties are closely related, in theory, to the manufacturer's representation, which is implied by the strict liability rule of tort law, that his product is reasonably safe for its intended purpose.[95] The promisor who breaches a warranty is subject to strict liability similar to that of a manufacturer under strict product liability in tort.[96] The terms of the warranty define the scope of the manufacturer's duty. Strict, versus conditional, contract duties are a form of insurance and are used "in order to transmit information or to make information credible so that it may be used by others."[97]

The fundamental distinction drawn by the Tort Reform Act of 1981, and acknowledged by the Washington Supreme Court in *Stuart*, that recovery for pure economic loss is limited to contract remedies while recovery for economic loss associated with personal injury or property damage is allowed in tort, appears to be a distinction without a difference.[98] Economically, lost wages are analogous to lost profits. In a given case, the presence or absence of personal injury or property damage, in addition to economic loss, has no effect on the eco-

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90. WASH. REV. CODE § 62A.2-313(1)(a).

91. *Id.* § 62A.2-314(1).

92. *Id.* § 62A.2-314(2)(c).

93. *Id.* § 62A.2-315.

94. *Id.* § 62A.2-314(3).

95. Products liability is a "hybrid, born of the illicit intercourse of tort and contract, unique in the law." *Stuart*, 109 Wash. 2d at 418, 745 P.2d at 1290 (quoting W. PROSSER, TORTS 634 (4th ed. 1971)).

96. Bishop, *supra* note 12, at 244.

97. *Id.* at 245 (Information gaps need to be overcome with strict duties where the manufacturer has an advantage over the buyer in knowledge.).

98. *See supra* text accompanying notes 35-42.

nomic rationale for allocating economic loss between the parties. Consequently, the following analysis is equally applicable to pure economic loss, regardless of whether personal injury or property damage has also occurred..

When a buyer brings an action under a warranty theory, the manufacturer will be held strictly liable for loss if a breach is found.[99] A manufacturer will maximize profits by taking a cost-effective level of care and buying insurance for any other loss, just as he would under strict liability in tort. The difference between strict liability in tort and strict liability under a warranty theory, however, makes a warranty recovery for pure economic loss more efficient than similar recovery in strict tort liability in the vast majority of cases in which pure economic losses are likely to occur. The warranty remedy is more efficient because the adverse selection problem that plagues strict liability is largely eliminated in the contract arena by the *Hadley* foreseeability doctrine.[100] Moreover, the manufacturer remains free to disclaim all warranty liability when the buyer would be a cheaper insurer.

Recovery for consequential economic loss against a manufacturer would be barred if the buyer did not reveal the risk of that loss to the manufacturer and pay him to assume it. No longer would the manufacturer need to play guessing games about widely varying potential liability. Under a contract rule, then, the manufacturer would assume only those risks that he could prevent more efficiently than the buyer. A buyer who knew he was the cheapest insurer against the risk would not bother to bargain with respect to the risk with the manufacturer, because he would not want the manufacturer to assume the risk. The price would be too high.

Although the *Hadley* foreseeability rule and the privity rule act to restrict the availability of contract recovery, they promote efficiency in the commercial setting. A commercial buyer, who is most aware of his potential losses, is likely to bargain with the manufacturer or obtain express warranties from the retailer regarding the risk of economic loss and should be encouraged to seek efficient risk allocation. *Hadley* forces the commercial buyer to make his risks known if he wants the manufacturer to bear the risk. The manufacturer can then act accordingly, either by disclaiming liability,

99. *See supra* text accompanying notes 95-97.
100. *See supra* text accompanying notes 24-27.

purchasing market insurance, or exercising a higher level of care.

A noncommercial buyer is not likely to have any pure economic loss, and if he does, it is likely to be small. Someone who buys a computer so his children can play video games or to calculate home finances will likely suffer very little consequential economic loss if the computer breaks down. His damages will likely be limited to cost of repair, which is ordinarily covered by warranty. Thus, restricting recovery of pure economic loss to the contract setting will not foreclose this type of remedy. To the extent a buyer uses a product in income generating activity, such as one who buys a computer to aid him in a stock trading "hobby" that creates substantial income, the buyer can be expected to behave like a commercial buyer.

On the other hand, a small-business buyer who straddles the line between a consumer and a large commercial buyer may be foreclosed from recovery of pure economic loss if that recovery is restricted to contract. For some small-business buyers, transaction costs involved in dealing directly with the manufacturer may prevent the buyer from bargaining effectively with regard to his potential economic loss. Nevertheless, the market may generate efficient terms for the small-business buyer through the marginal buyer.

Under a warranty theory of recovery for pure economic loss, the individual buyer will demand only a moderate use of the product because any overly intensive use might increase the risk of pure economic loss not contemplated by the manufacturer. Under such circumstances, recovery is denied under the *Hadley* foreseeability rule. A buyer bearing that risk himself is not likely to use the product at maximum intensity.

If the buyer and manufacturer agree that the manufacturer will bear the risk of economic loss to the buyer, demand and supply will shift as in the Figure 5 strict liability diagram. The cost of the contract will increase, but so will the buyer's utility because he will be able to use the product more intensively. Some small commercial buyers may be less likely to make pure economic loss part of the contract because of high transaction costs. The marginal buyer, however, will likely create the market pressures necessary to induce manufacturers to offer warranties with efficient terms. Assuming perfect knowledge, the small commercial buyer knows that the foreseeability rule and the privity rule will bar his recovery against the manufacturer. Accordingly, he will stay at D_{mod}, and the supply curve will shift upwards. Therefore, when recovery is limited to warranty, incentives exist for the small commercial buyer to take cost-effective measures to prevent pure economic loss. This result approximates the activity level under a negligence and comparative fault rule.

If it is not possible to self-insure, and the market is resistent to the pressures of the marginal buyer, such as in noncompetitive markets, the small commercial buyer should be allowed a recovery for pure economic loss in negligence. Where it is possible to self-insure, negligence liability is probably not the efficient solution because the manufacturer will have great difficulty estimating PL in the Hand formula. Additionally, if market insurance is more expensive than self-insurance, consequential loss will be disclaimed. In fact, in many consumer contracts, liability for consequential loss is disclaimed.[101]

When comparing contract to tort remedies on the question of which minimizes litigation and administrative costs, a contract rule appears superior. Although a contract requires bargaining costs up front, it saves costs later on as contingencies considered in the contract occur. The parties can not only predetermine liability by allocating risk, but they can also predetermine damages by providing a liquidated damages clause. Thus, when parties are able to bargain, a contract rule minimizes litigation costs by eliminating the need for judicial determinations of liability and damages. When parties are unable to cost-effectively bargain over a term, however, a contract rule performs no better than a tort rule in minimizing litigation costs because the court will need to guess what the parties would have bargained for on that term.

IV. CONCLUSION

The Tort Reform Act of 1981, if not undermined by *Stuart v. Coldwell Banker*,[102] aligns the law of Washington with the majority of courts and commentators, who agree that pure economic loss should be compensable only under contract law. Overall, the Act is an improvement upon prior Washington law and the minority view. Restricting recovery for pure economic loss to contract remedies avoids the difficulty suffered by man-

101. *See* Priest, *supra* note 83, at 1345.
102. *See supra* note 39 and accompanying text.

ufacturers in ascertaining the appropriate level of care in negligence when the magnitude of the risk is difficult to estimate. In addition, restricting recovery to the law of contracts avoids the moral hazard and adverse selection problems created by the strict liability rule. Finally, the Act creates positive incentives for buyers and sellers to anticipate, estimate, and allocate liability for commercial loss in a contractual setting.

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