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AUTOMOBILE AND TRACTOR LEMON LAWS

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Introduction

Consumer dissatisfaction with redress provisions of state commercial codes and the federal Magnuson-Moss Warranty Act for nonconforming products led to the enactment of state lemon laws in the 1980s.[1] Lemon laws involve producer-manufacturers' duties to repair nonconformities and to take back nonconforming vehicles and replace the vehicles or refund the purchase price. Although lemon laws are best known for their statutory warranty coverage of new automobiles, new and expanded provisions also cover used automobiles and leased automobiles,[2] self-propelled agricultural equipment (tractors),[3] and even wheelchairs.[4] The laws may be grouped in two major categories, one for automobiles and one for tractors.

Lemon laws delineate statutory warranties and impose liability on producers above levels that would be undertaken voluntarily. As consumer legislation, lemon laws ease consumers' burden of proof of defects,[5] encourage extrajudicial resolution of disputes,[6] and simplify restitution for nonconforming products.[7] The provisions thereby provide incentives unlike those provided by consumer demand and serve as a policy instrument for improving market performance distinct from direct safety legislation and information available through producer warranties, two other regulatory alternatives for intervention in the market.[8]

Probability of product nonconformity creates market imperfections, and due to the random character of nonconformity, consumers may have less than full information concerning the distribution of product nonconformity. In an effort to overcome problems of risk and moral hazard, lemon laws prescribe statutory warranties which serve to increase product quality, augment remedies for a nonconformity, and diminish the probability that a consumer will receive a nonconforming product.[9]

The value consumers place on automobile lemon laws was investigated by Smithson and Thomas (1988), and they concluded that consumers place a relatively small value on the lemon-law protection because consumers do not believe it is likely they will end up with a lemon vehicle. An expected consequence of this consumer perception is insufficient consumer demand for product reliability. This provides a justification for governmental market intervention in the form of lemon laws with consumer remedies for nonconforming products.

Warranty remedies include replacing nonconforming items and the refund of the purchase price.[10] Replacement remedies range from partial replacement of parts to full replacement of the vehicle, and from repairing the product during a specified warranty period to lifetime full replacement. Both replacement and refund remedies may be supplemented by requirements providing the remuneration of incidental and consequential damage costs incurred by buyers as a result of the nonconformity.[11] Choice among these remedies has important implications for levels of action taken by producers.

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The issue addressed in this paper concerns the efficient level of remedy in the form of warranty legislation as a policy instrument for improving market performance. An economic efficiency model of warranties based on a principal-agent model is developed with the state being the principal and the producer-manufacturer being the agent. Drawing upon distinctions of the automobile and tractor lemon laws for nonconformities and remedies, the model investigates the effects of warranty laws on producers' incentives for providing conforming products. Results indicate that as the qualifications for a nonconformity are weakened, remedy costs should rise. In terms of the automobile and tractor lemon laws, the principal-agent model discloses inconsistent provisions that suggest the tractor laws may be inefficient.

General Distinctions Between Lemon Laws

Although lemon laws have disparate provisions governing refunds or replacements for nonconformities, two categories of generalized distinctions may be noted between the automobile and tractor laws. The first category concerns statutory obligations governing nonconformities and the types of obligation that might be breached to qualify a consumer for lemon-law relief. The second category concerns restitution and distinctions existing among penalties and types of relief.

Obligations and Nonconformities

Lemon-law nonconformities involve a breach of a producer's obligation to provide a serviceable vehicle to a consumer. As a result obligation,[12] the statutory provisions delineate the promises to be performed to remedy nonconformities; however, statutory prerequisites may proscribe promises and reduce obligations. A reduction of obligations diminishes the likelihood of a breach and decreases the probability of a nonconformity. An analysis of lemon laws discloses four statutory prerequisites that restrict the obligations that could lead to a nonconformity: the definition of vehicles, limitation on qualifying warranties, qualifications for substantial impairment, and a requirement limiting qualification for loss of service remedies. These prerequisites are only present in the tractor lemon laws, which suggest that the automobile laws embody a broader definition of nonconformity.

An initial prerequisite circumscribing statutory obligations is the definition of vehicles. The tractor laws only cover new vehicles whereas many of the automobile laws also cover leased, demonstrator, and reconveyed vehicles.[13] The exclusion of these categories of vehicles by the tractor laws markedly diminishes the likelihood of a breach.

A second prerequisite involves a limitation on qualifying warranties. Nonconformities under the tractor laws can only occur for items guaranteed by the producer in writing.[14] For example, a producer could decline to warrant a tractor's engine and if the engine failed during the first day of use the consumer could not resort to the tractor lemon law as a remedy. Consumers' recovery under the automobile lemon laws generally may be based upon any written or oral warranty, and in some cases on an implied warranty.[15] Thereby, the tractor law prerequisite enables producers to control the items or conditions warranted and limit consumers' recovery.

The definition of substantial impairment may abate the obligations imposed by the tractor laws. A nonconformity for automobiles typically is a defect or condition that "substantially impairs the use, value, or safety of a new motor vehicle to the consumer. . . ."[16] The further definition of substantial impairment distinguishes three alternative tests for consumers of automobiles that may be used to show a nonconformity: the vehicle is unreliable, the vehicle is unsafe, or the vehicle has a diminished resale value. In contrast, provisions of the tractor lemon laws only impose a duty to replace lemon vehicles or refund the purchase price if the nonconformity substantially impairs use, market value, or both. The Illinois law simply grants relief for the substantial impairment of the use of the tractor[17] while the Virginia law requires impairment of both use and market value.[18] The Georgia and Minnesota laws require the nonconformity to substantially impair use or market value, but an affirmative defense would require both to be impaired before a consumer meets the statutory requirements for a refund or replacement.[19]

These qualifications for substantial impairment disclose three situations whereby the tractor laws contain fewer obligations than the automobile laws. A consumer of a tractor that only has a safety problem but the problem does not substantially impair its use or market value would not qualify for a refund or a replacement vehicle; a consumer of a tractor with a defect that meaningfully diminished its value but did not substantially impair the market value may not qualify for restitution. Third, a consumer of a tractor with a defect that substantially impairs only its use or market value and not both may not qualify for statutory relief.

Another prerequisite involves a qualification for a refund or replacement based upon loss of service due to repairs. All lemon laws provide that if the vehicle is out of service due to repairs for more than a statutorily delineated number of days, the consumer is entitled to a replacement vehicle or a refund of the purchase price. Automobile lemon laws allow the aggregation of different nonconformities to meet the statutorily prescribed period;[20] the tractor lemon laws require the same nonconformity to preclude usage of the vehicle for more than the statutorily prescribed period before a consumer may qualify for a refund or replacement.[21] Thus, the prerequisite reduces the likelihood that a consumer of a tractor will qualify for a breach of a statutory warranty.

Restitution

Restitution provisions suggest that the automobile laws provide consumers greater relief than the tractor laws. Under the automobile lemon laws, a consumer who is entitled to a replacement or refund is entitled to collateral charges and incidental costs.[22] These costs would include sales taxes, financing charges, towing charges, and costs of obtaining alternative transportation, but would be offset by a reasonable allowance for consumer use of the lemon vehicle. The tractor lemon laws do not provide recompense to farmers to compensate for towing charges or the rental of other equipment while their new tractors are under repair.

A loaned tractor exception may negate completely replacements or refunds for a nonconformity under the tractor lemon laws. The exception declares that if a consumer is provided the use of another farm tractor which performs the same function, the statutorily prescribed out-of-service period is tolled.[23] This allows producers to provide a substitute tractor and eliminate qualification for a replacement or refund.[24] For example, if qualification for relief was to be based on the vehicle being out of service due to repairs for too many days, the

consumer could be loaned another tractor until the statute of limitations had expired. Moreover, a consumer might be loaned another tractor for the remainder of the statutory term so that the vehicle would not break down enough times to quality the consumer to statutory relief. Thus, the loaned tractor exception provides a method for producers to avoid replacements or refunds.

Principal-Agent Lemon-Law Model

The economic efficiency of lemon laws may be investigated in a principal-agent model. To eliminate certain preventable accidents, the state wants to induce producers of vehicles to reduce the level of nonconformities. Since the reduction of nonconformities is costly, the state's objective is to design a warranty law that induces the producer to take the best action (precaution) from the viewpoint of the state. In the literature, this is defined as a principal-agent problem where the state is the principal and the producer is the agent.[25] For modeling warranty law, the principal-agent problem is modified so that the principal employs a penalty based on warranty law as opposed to a payment. Furthermore, the objective of the state is solely to induce a certain action, which does not include maximizing the extraction of economic surplus from the producer.

Definition and Objective

Let x_c be the monetary value for a set of defects associated with a conforming vehicle and x_n be the monetary value for a set of nonconforming vehicle defects, where neither set is observable at time of sale. The four statutory prerequisites, discussed above, imply

$$x_c/_{tractors} > x_c/_{autos}.$$

Following Varian (1988), let a and b be possible levels of precaution that can be chosen by a producer out of some set of feasible actions, A, which influence the probability of occurrence of x_c and x_n. Let v(a) and v(b) be the costs of precautions a and b, respectively, and π_{cb} denote the probability that x_c is observed if the producer chooses precaution b. To provide incentives for a producer to take precaution b, the state may levy certain penalties $s_c(x_c)$ and $s_n(x_n)$ associated with x_c and x_n, respectively. These penalties may consist of restitution provisions in lemon laws that outline a producer's duty to establish arbitration mechanisms, repair vehicles, or take back and replace a vehicle. As addressed above, the different restitution provisions for automobiles and tractors result in

$$s_n/_{tractors} < s_n/_{autos}.$$

Assuming the state is risk neutral, the state's expected returns if a producer chooses precaution b is

$$(s_c - x_c)\pi_{cb} + (s_n - x_n)\pi_{nb}. \quad (1)$$

Assume a producer is risk averse and has the objective of maximizing a von Neumann-Morgenstern utility function with precaution cost entering linearly into utility, u. The producer will choose precaution level b if the incentive compatibility constraint is satisfied

$$u(s_c)\pi_{cb} + u(s_n)\pi_{nb} + v_b \leq u(s_c)\pi_{ca} + u(s_n)\pi_{na} + v_a, \quad (2)$$

and will choose a otherwise.[26] The producer will choose the best precaution level given the warranty law that the state picks. Although the state is not able to choose the producer's level of precaution directly, it can influence the producer's level through statutory warranty law.

The producer's costs s_c, s_n, and v_b are negativity related to utility. A prohibitively strong warranty law accompanied by high producer penalties may induce the producer not to participate; the penalties of producing a nonconformity vehicle are so high that the producer exits the market. If the producer does not participate, assume the producer's reservation disutility level is $\bar{u}$. The expected utility from participation must then be

$$u(s_c)\pi_{cb} + u(s_n)\pi_{nb} + v_b \leq \bar{u}. \quad (3)$$

Constraint (3) is called the participation-individual rationality, or reservation level of utility constraint. The producer may have other opportunities available that result in some reservation level of utility. The state may want to ensure the producer receives at least this reservation level. As discussed in Kreps (1990), this formulation is far from general. A very special form of a utility function is assumed for the producer and the state is assumed to be risk neutral. However, the analysis can be extended to encompass more general formulations.[27]

The state's objective is to maximize (1) subject to constraints (2) and (3). Assume that precaution level b is induced from the optimal incentive scheme, s_c and s_n, determined from maximum of (1). Kuhn-Tucker first-order conditions for this maximum can be derived by differentiating the Lagrangian, resulting in

$$\pi_{ib} - \lambda u'(s_i)\pi_{ib} - \mu u'(s_i)(\pi_{ib} - \pi_{ia}) = 0, \; i = c \text{ and } n, \quad (4)$$

where λ and μ are the Lagrange multipliers associated with (3) and (2), respectively. Equation (4) may be interpreted by dividing by $u'(s_i)\pi_{ib}$ and rearranging terms

$$\frac{1}{u'(s_i)} = \lambda + \mu\left[1 - \frac{\pi_{ia}}{\pi_{ib}}\right], \; i = c \text{ and } n. \quad (5)$$

Suppose $\mu = 0$, the incentive compatibility constraint is nonbinding, then (5) implies that $u'(s_i) = 1/\lambda$, some constant. Penalty to the producer is independent of the outcome, x_i, so s_i is equal to some constant $\bar{s}$. Substituting $\bar{s}$ into (2), and noting that probability distributions sum to one, yields

$$v_a \geq v_b. \quad (6)$$

The case where $\mu = 0$ can only arise when the precaution level that is preferred by the state is also the low-cost action for the producer. When the incentive compatibility constraint is binding, $\mu \neq 0$, the costs to the producer will vary with the outcome. The state desires a precaution level that imposes high costs on the producer, so the cost to the producer will depend on the behavior

of the likelihood ratio π_{ca}/π_{cb}. This likelihood ratio measures the likelihood of observing x_c given that the producer chooses a to the likelihood of observing x_c given that the producer chooses b. A high value of the likelihood ratio is evidence that the producer chooses a, while a low value indicates the producer chooses b.

Graphical Treatment

Following Varian (1992), it is convenient for graphical treatment to reformulate the problem as one with linear constraints and a nonlinear objective function. Let u_i be the penalty associated with precaution level x_i, $u(s_i) = u_i$, and f be the inverse of the utility function, $s_i = f(u_i)$, i = c and n. The largest possible utility that the state receives if it designs a scheme that induces the producer to choose precaution level b is

$$V(b) = \max_{u_c,u_n} [f(u_c) - x_c]\pi_{cb} + [f(u_n) - x_n]\pi_{nb}, \tag{7}$$

subject to

$$u_c\pi_{cb} + u_n\pi_{nb} + v_b \leq u_c\pi_{ca} + u_n\pi_{na} + v_a; \tag{8}$$

$$u_c\pi_{cb} + u_n\pi_{nb} + v_b \leq \bar{u}. \tag{9}$$

The constraint set determined by (8) and (9) is illustrated in Figure 1. A producer choosing precaution a or b has linear indifference curves:

$$u_c\pi_{cb} + u_n\pi_{nb} + v_b = constant;$$

$$u_c\pi_{ca} + u_n\pi_{na} + v_a = constant.$$

The equality of (8) corresponds to the point where the producer's two indifference curves intersect. Solving for u_c at this equality and noting

$$\frac{\pi_{ca} - \pi_{cb}}{\pi_{nb} - \pi_{na}} = 1,$$

results in

$$u_c = u_n + \frac{v_a - v_b}{\pi_{cb} - \pi_{ca}}. \tag{10}$$

The region where precaution b is preferred by the producer is the region below the line formed by (10). The participation constraint requires that

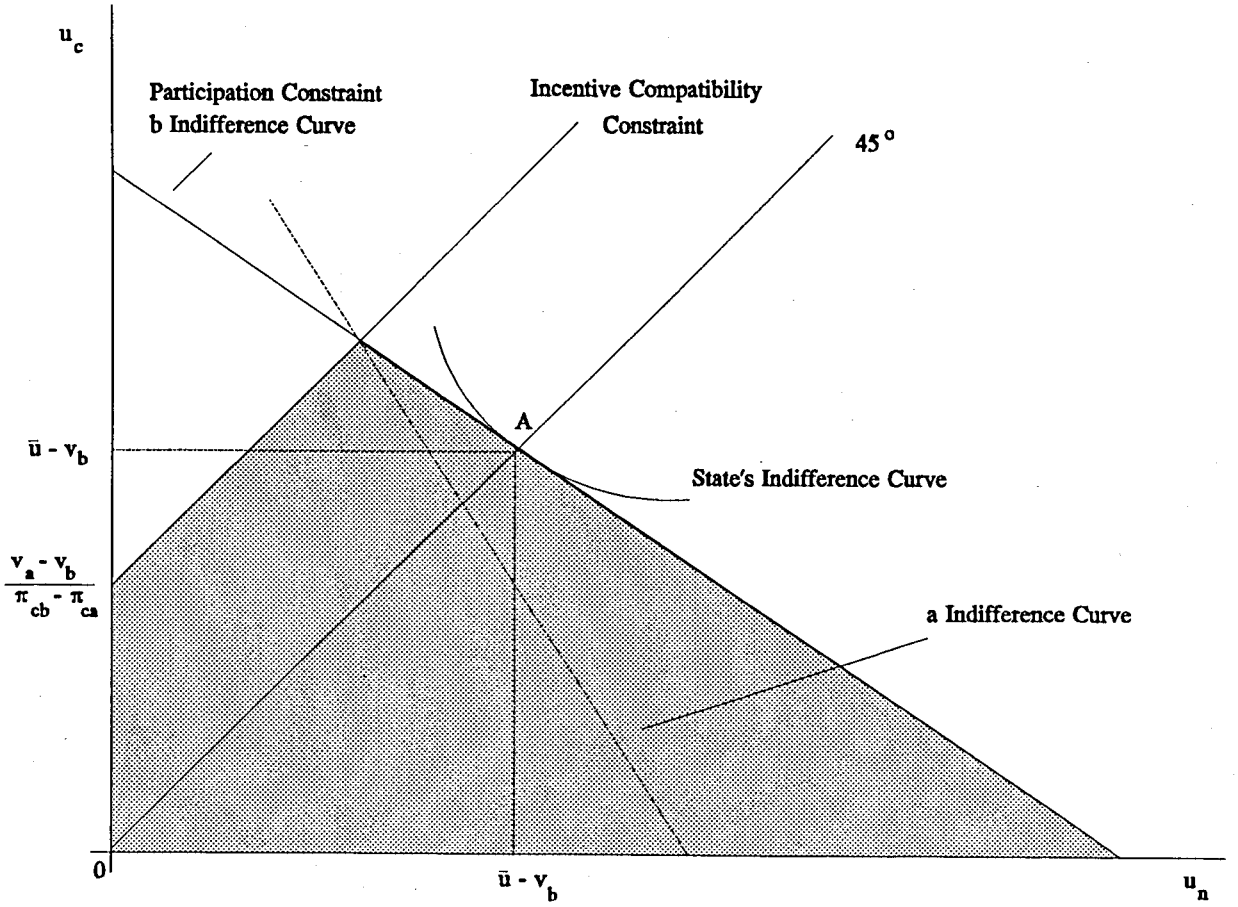

Figure 1. Nonbinding Incentive Compatibility Constraint Warranty Legislation

$$u_c\pi_{cb} + u_n\pi_{nb} + v_b \leq \bar{u}.$$

The shaded area represents the area where the regions intersect, satisfying the two constraints.

The indifference curves of the state are formed by

$$[f(u_c) - x_c]\pi_{cb} + [f(u_n) - x_n]\pi_{nb} = constant.$$

The utility of the state decreases as s_c and s_n decreases. The state's marginal rate of substitution, MRS_s, is

$$MRS_s = \frac{f'(u_n)\pi_{nb}}{f'(u_c)\pi_{cb}}.$$

The producer's MRS_a is

$$MRS_a = \frac{\pi_{nb}}{\pi_{cb}}.$$

When the penalties u_c and u_n are equal, $u_c = u_n$, as illustrated by the 45 degree line in Figure 1, the state's and producer's indifference curves are tangent. If the incentive compatibility constraint is nonbinding, as presented in Figure 1, the producer's penalty associated with the conformity and nonconformity is constant. It does not vary if the producer conforms or nonconforms.

If the state exercised its full monopoly power, point A in Figure 1 would correspond to the maximum for (7) with a level of penalty $u_c = u_n = \bar{u} - v_b$. The state would extract the reservation value of utility. This represents a lump-sum tax on the producer independent of whether the producer conforms. For a level of taxation at or below this reservation value, the producer will always choose the desired precaution level b, because of (6). The producer will maximize utility where $u_c = u_n = 0$, at the origin. At all points on this Pareto efficient cord from the origin to point A, the level of nonconformity is the same. Only a shifting of economic surplus between the producer and the state occurs depending on the magnitude of this tax. Warranty legislation is generally not used as a lump-sum taxation method. Thus, no warranty legislation would be enacted and the equilibrium is $u_c = u_n = 0$.

If the incentive compatibility constraint is binding, as illustrated in Figure 2, the penalty to the producer will vary with the outcomes x_c and x_n. The producer has the option of either adopting the lower cost precaution level a, $v_a < v_b$, and incurring penalty u_n when a nonconformity occurs with probability π_{na}, or choosing precaution level b and incurring cost v_b and penalty u_n with a lower probability π_{nb}. If the state exercises its full monopoly power, point C, u_c^C and u_n^C are the threshold levels of penalties where the producer is indifferent between precautions a and b. In contrast, the minimum level of penalties at a threshold level of disutility is u_n^* associated with $u_c = 0$ in Figure 2.

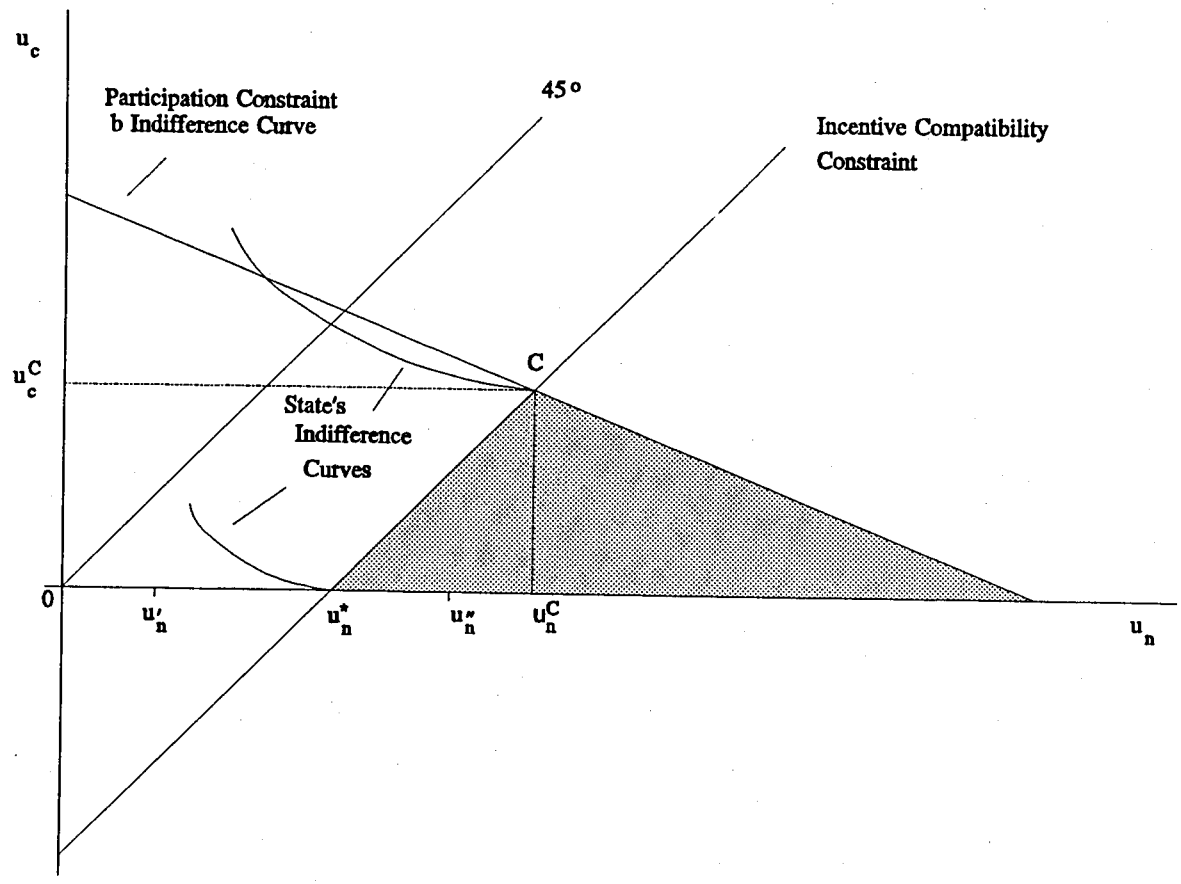

Figure 2. Binding Incentive Compatibility Constraint Warranty Legislation

Inducing Precaution

Assuming the state is solely interested in warranty laws to induce producers to employ precaution b and not as a taxation method, then the equilibrium threshold level is u_n^* and $u_c = 0$. If a producer produces a vehicle which conforms to the terms of the warranty law, no costs for repair or replacement of the vehicle are incurred as a result of the warranty. Alternatively, if the vehicle does not conform with the warranty law, the producer will incur an additional cost u_n^*. This provides an incentive for decreasing the probability of producing a nonconformity by employing precaution b. If the state sets u_n below this threshold value u_n^*, say u_n', the disincentive will not be sufficient to induce producer's adoption of desired precaution b. Alternatively, a level above the threshold value u_n^* and still satisfying the participation constraint, say u_n'', will induce producer's adoption of precaution b. If the disincentive becomes so large that the participation constraint is violated, the producer exits the market.

The threshold penalty u_n^* depends on the relative cost of alternative precaution v_a/v_b, and on the relative probability of conformity given alternative precaution π_{ca}/π_{cb}. As v_a/v_b increases or π_{ca}/π_{cb} decreases, the incentive compatibility constraint shifts to the left, decreasing the threshold level of disincentive. The ratio v_a/v_b is $0 \leq v_a/v_b \leq 1$, and as this ratio approaches one, the intercept of the incentive compatibility constraint approaches zero where the constraint corresponds to the 45 degree line out of the origin. The incentive compatibility constraint is no longer binding and thus the threshold u_n^* is zero. As the ratio v_a/v_b approaches zero, the cost differential between precautions a and b increases, which increases threshold u_n^*. The disincentive of the producer selecting precaution a must increase to offset the increased cost difference between precautions a and b.

The threshold u_n^* is also influenced by the probability of vehicle conformity given precautions a and b. The ratio π_{ca}/π_{cb} is $0 \leq \pi_{ca}/\pi_{cb} \leq 1$, and as this ratio approaches one, the threshold u_n^* increases. As the probabilities of producing a conforming vehicle under the alternative precautions converge, the penalty associated with the producer selecting precaution a must increase in order for the producer to be willing to adopt precaution b. In the limit, both precaution levels are the same in terms of probability of conformity so the level of u_n^* will not alter the precaution of the producer. In contrast, if the ratio $\pi_{ca}/\pi_{cb} = 0$ implying $\pi_{ca} = 0$ and if $\pi_{cb} = 1$, then $u_n^* = v_b - v_a$, the cost differential between alternative precautions. As π_{cb} decreases from one, u_n^* increases by the proportion

$$u_n^* = \frac{v_b - v_a}{\pi_{cb}}.$$

Assuming the monotone likelihood ratio property from the regularity conditions in the statistics literature, a relation between π_{ca}/π_{cb} and x_c can be established.[28] The monotone likelihood ratio property requires that π_{ca}/π_{cb} be monotone increasing in x_c, which also results in u_n^* monotone increasing in x_c. Considering the levels of conformity for automobile and tractor lemon laws, as delineated by warranty legislation, automobile lemon laws generally would induce fewer defects compared with tractor lemon laws. This implies

$$x_c|_{autos} < x_c|_{tractors}. \tag{11}$$

Relatively more tractors conform under the tractor lemon laws, but the level of defects is higher compared to the automobile lemon laws. Equation (11), given the monotone likelihood ratio property, results in

$$\frac{\pi_{ca}}{\pi_{cb}}|_{autos} < \frac{\pi_{ca}}{\pi_{cb}}|_{tractors},$$

which implies $u_n^*|_{autos} < u_n^*|_{tractors}$. The current lemon laws for automobiles and tractors are not consistent with this result. Under current laws, the level of penalty u_n is reversed; the tractor lemon laws require fewer remedies than automobile laws. As conformity standards are weakened, a shift from automobile to tractor lemon laws, the threshold level of penalties for not taking the state's preferred level of precaution should increase. Instead the penalties decrease, penalties under tractor lemon laws are less severe compared with automobile lemon laws.

This inconsistency of the laws with economic efficiency suggests two possible scenarios. First, the definition of nonconformity under automobile laws may be too strong in terms of increasing the probability of nonconformity, compared with the level of penalties for nonconformity. In the alternative, the tractor laws' definition of nonconformity may be too weak relative to their associated penalties. Smithson and Thomas (1988) provide evidence as an aid in determining the likelihood of one scenario over the other. As an explanation for why consumers place a low value on lemon laws, Smithson and Thomas (1988) note the substantially upgraded and streamlined arbitration mechanisms now employed by automobile producers. These new mechanisms substantially reduce the probability of consumers taking actions under lemon laws, and thus, they place a low value on lemon laws. This implies that the penalty u_n associated with the automobile lemon laws is equal to or greater than the threshold $u_n^*|_{autos}$. Assuming automobile lemon laws played a role in this upgrading, the laws had the desired effect of inducing producers' adoption of precaution levels that significantly decreased the probability of nonconformity, precaution b.

Tractor lemon laws are relatively new so no similar evidence as associated with automobile laws is available. However, given relative higher likelihood ratios and lower u_n associated with tractors, tractor producers do not have as strong an incentive to adopt the preferred precaution b. Thus, the probability of being below the threshold $u_n^*|_{tractors}$ is significantly enhanced. If state legislators desire tractor producers to adopt similar precautions as automobile producers, consideration of changing the definition of nonconformities and increasing the penalties associated with nonconformities at or near levels associated with automobile lemon laws may be required.

Conclusion

When designing remedies for nonconforming products, the level of nonconformity and associated penalties should be considered. For economic efficiency, a strong conformity law can be coupled with relatively low penalties. As the definition of conformity is weakened, the level of penalties associated with nonconformity should increase. As evidenced by the current lemon laws for automobiles and tractors, this economically efficient relation between conformity and

penalties does not always exist. In particular, given the inconsistent weak conformity definition associated with relatively low penalties for nonconformities, the probability of current tractor lemon laws providing sufficient inducement for efficient producer precaution is questionable.

Endnotes

1. *See* Dahringer and Johnson (1988); Greenberg (1989); LaManna (1991); Reitz (1988); Samuels, Coffinberger, and McCrohan (1986); Swanson (1987); Vogel (1985).

2. *E.g.*, Ga. Code Ann. § 10-1-782(11) (1993); Va. Code Ann. § 59.1-207.11 (1992).

3. Ga. Code Ann. §§ 10-1-810 to -819 (1993); Ill. Comp. Stat. Ann. ch. 815, §§ 340/1 to 340/11 (1993); Minn. Stat. Ann. §§ 325F.6651 to .6658 (1993); Va. Code Ann. § 59.1-207.7 to -207.8 (1992).

4. Ga. Code Ann. §§ 10-1-890 to -893 (1993); Wis. Stat. Ann. § 134.87 (1993). The laws for wheelchairs will not be considered.

5. It may obviate the proof of notice. *See* Norman (1992); Vogel (1985).

6. *See* Adams (1992); Dahringer and Johnson (1988); Kegley and Hiller (1986); Nicks (1987).

7. Lemon laws circumvented the federal Magnuson-Moss Warranty Act's requirement of a full warranty. *See* Adams (1992). Lemon laws also circumvented manufacturer provisions limiting remedy to repair or replacement at the manufacturer's option. LaManna (1991).

8. Courville and Hausman (1979); Spence (1977).

9. Cooper and Ross (1985); Grossman (1981); Priest (1981).

10. Chapman and Meurer (1989).

11. *E.g.*, Uniform Commercial Code §§ 2-714, 2-715 (1977); Minn. Stat. Ann. § 325F.665 (1993); Va. Code Ann. § 59.1-207.13 (1993).

12. Zamir (1991).

13. *E.g.*, Ga. Code Ann. § 10-1-782(11) (1993); Va. Code Ann. § 59.1-207.11 (1992).

14. Ga. Code Ann. §§ 10-1-813 to -814 (1993); Ill. Comp. Stat. Ann. ch. 815, §§ 340/3 & 340/4 (1993); Minn. Stat. Ann. §§ 325F.6653 to .6654 (1993); Va. Code Ann. § 59.1-207.8 (1992).

15. *E.g.*, Ill. Comp. Stat. Ann. ch. 815, § 380/3 (1993); Va. Code Ann. §§ 59.1-207.11 to .12 (1992).

16. Ga. Code Ann. § 10-1-782(13) (1993).

17. Ill. Comp. Stat. Ann. ch. 815, § 340/4 (1993).

18. Va. Code Ann. § 59.1-207.8B (1992).

19. Ga. Code Ann. §§ 10-1-814(a), 10-1-817(1) (1993); Minn. Stat. Ann. §§ 325F.6654, 325F.6657 (1993).

20. *E.g.*, Ga. Code Ann. § 10-1-784(b) (1993); Ill. Comp. Stat. Ann. ch. 815, § 380/3 (1993); Minn. Stat. Ann. § 325F.665 (1993); Va. Code Ann. § 59.1-207.13 (1992).

21. Ga. Code Ann. § 10-1-814(c) (1993); Ill. Comp. Stat. Ann. ch. 815, § 340/4 (1993); Minn. Stat. Ann. § 325F.6654 (1993); Va. Code Ann. § 59.1-207.8B (1992).

22. *E.g.*, Ga. Code Ann. § 10-1-782(7) (1993); Minn. Stat. Ann. § 325F.665 (1993); Va. Code Ann. § 59.1-207.13 (1992).

23. Ga. Code Ann. § 10-1-814(a) (1993); Ill. Comp. Stat. Ann. ch. 815, § 340/4 (1993); Minn. Stat. Ann. § 325F.6654 (1993); Va. Code Ann. § 59.1-207.8B (1993).

24. Centner (1992).

25. Varian (1992).

26. Kreps (1990); Varian (1992).

27. Grossman and Hart (1982).

28. Kreps (1990); Varian (1992).

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