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Deterrence in Tort and No-Fault: The New Zealand Experience

Craig Brown†

The question of deterrence retains a prominent place in debates about the effectiveness of negligence law in attaining socially useful goals.¹ Deterrence has been a key factor in the deliberations of policy-makers considering whether a no-fault insurance system should replace all or part of an existing tort law system,² particularly in the United States and Canada.³ According to the traditional view, the threat of a serious financial burden resulting from tort liability serves as an incentive for potential tortfeasors to avoid injury-causing activities—or at least to conduct such activities with a greater regard for safety.⁴ Heavily influenced by economic theory, commentators more recently have regarded the deterrent role of negligence law as seeking not the elimination of all injuries, but an optimum balance between the number of injuries and the social benefits of the activities which produce them.⁵

This economic theory of deterrence depends on the “internalization” of injury costs. If those participating in a particular activity are charged with the full cost of the injuries that activity causes, they must determine whether, given the costs, they can afford to continue with the activity. If the cost is prohibitive, they are forced to cease the activity or seek ways to reduce the cost of the activity (i.e. reduce the number and/or severity of the injuries caused). Consequently, a more efficient allocation of society’s resources results.

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1. For recent articles on the subject, see Fleining, *Is There a Future for Tort?*, 58 AUSTL. L.J. 131 (1984); Klar, *New Zealand’s Accident Compensation Scheme: A Tort Lawyer’s Perspective*, 33 U. TORONTO L.J. 80 (1983).

2. See, e.g., 1 NATIONAL COMM. OF INQUIRY, COMPENSATION AND REHABILITATION IN AUSTRALIA ¶¶ 117-120, at 47-48 (1974).

3. See, e.g., *Report of the Special Committee on Automobile Accident Reparations*, 94 REP. A.B.A. 559, 573 (1969).

4. For a detailed discussion of the deterrence goal of tort law, see Williams, *The Aims of the Law of Tort*, 4 CURRENT LEGAL PROBS. 137 (1951).

5. The most noteworthy of these commentators are G. CALABRESI, *THE COSTS OF ACCIDENTS* (1970); Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29 (1972). For a critical survey of these and other theorists, see England, *The System Builders: A Critical Appraisal of Modern American Tort Theory*, 9 J. LEGAL STUD. 27 (1980).

In contrast, if the system of cost allocation fails to charge all or some of the costs to the activity causing them, the activity must be "subsidized" by other segments of society. This "subsidy" causes a misallocation of resources. The activity continues without taking its injury costs into account. Since more of the activity will be conducted than its true costs warrant, there is an underincentive to reduce accident costs.⁶ The economic model suggests, for example, that as more of the costs of accidents are externalized to the activity of motoring, motoring will increase at the expense of other, possibly more socially useful, activities.

In the automobile accident context, tort liability can operate simultaneously both to internalize the costs of motoring and to provide deterrence incentives (in the traditional sense) to those involved in motoring. In the traditional model of deterrence, those groups thought most likely to take effective measures to avoid accidents bear the cost. Thus, negligent motorists bear the cost of the injuries they cause, just as manufacturers bear the cost of injuries caused by defective automobiles. Whether negligence or strict liability controls, the possible tortfeasor has an incentive to take cost-justified precautions. In the absence of tort liability, the costs of injuries to pedestrians or roadside property,⁷ for example, would be externalized, whereas under a tort regime the motorist bears at least some of these costs.

Liability insurance does not undermine the internalizing function of tort law because the costs of accidents, although spread widely, are nevertheless borne by motorists as a group. Yet as those advancing the traditional view admit, insurance surely does have an impact on injury-causing behavior.⁸ Motorists—sometimes voluntarily, but also often under some form of state compulsion—protect themselves against the worst effects of incurring liability.⁹ As I have argued elsewhere,¹⁰ such

6. See Calabresi, *Some Thoughts on Risk Distribution and the Law of Torts*, 70 *YALE L.J.* 499 (1961).

7. Whether the costs of an injury to a pedestrian are properly attributable to the activity of motoring or walking remains problematical. See J. O'CONNELL, *ENDING INSULT TO INJURY: NO-FAULT INSURANCE FOR PRODUCTS AND SERVICES* 144 (1975) (quoting R. Roddis, Memorandum to Special Committee to Draft a Uniform Motor Vehicle Accident Reparation Act for the National Commission on Uniform State Laws, (June 15, 1972)). Note, however, that a no-fault scheme that gives pedestrians access to a motorist-funded insurance plan eliminates this externality.

8. See R. KEETON & J. O'CONNELL, *BASIC PROTECTION FOR THE TRAFFIC VICTIM* 252-56 (1965); Atiyah, *Accident Prevention and Variable Premium Rates for Work-Connected Accidents* (pts. 1 & 2), 4 *INDUS. L.J. (U.K.)* 1, 89 (1975); England, *supra* note 5, at 46; Fleming, *The Role of Negligence in Modern Tort Law*, 53 *VA. L. REV.* 815, 823-25 (1967).

9. Incentives in the form of premium adjustments based on driving records may remain. However, such incentives would have much less deterrent effect than uninsured liability. Moreover, liability insurance rates may reflect costs for accidents caused by defective automobiles, and individual drivers will not be "deterred" by paying higher insurance rates for vehicle defects which they cannot, in all probability, discover and correct.

10. Brown, *Deterrence and Accident Compensation Schemes*, 17 *U.W. ONT. L. REV.* 111 (1978-79).

protection weakens the deterrent effect of negligence law, at least as concerns automobile accidents.

Despite the protection provided by liability insurance, the deterrent effect of negligence law remains strong outside the context of motoring. For example, in products liability or medical malpractice cases, findings of liability may carry sanctions beyond any damage award, such as adverse publicity. In addition, different types of accident cases may create different opportunities for insurers to provide incentives that encourage their policyholders to take safety precautions. For example, in the industrial sphere, an insurer can inspect for hazards and use that information as a basis for deciding whether to accept an employer's liability risk and as a basis for setting premiums. Alternatively, an insurer can establish a system of experience rating and provide for penalties or bonuses.¹¹

In the area of automobile accidents,¹² on the other hand, a different set of factors alters the deterrence model. For example, motoring may be so important to people that they would be prepared to incur even substantially higher costs before abandoning the activity, hence casting doubt on the notion that internalization of costs would force significant changes in driving habits. Accident-producing behavior carries a substantial risk of injury to the potential tortfeasor himself. Dangerous conduct commonly constitutes a criminal offense.¹³ If a motorist is undeterred by the threat of injury to himself and the threat of penal sanctions,¹⁴ he will be unlikely to be deterred by the possibility of tort liability, particularly if an insurer will absorb the worst consequences. Finally, in a world where traffic accidents have become commonplace, and where moral blame rarely follows,¹⁵ the prospect of adverse publicity attaching to a mere finding of negligence constitutes an acutely impotent sanction, particularly when an insurance company will most likely

11. Because of administrative costs, such ratings are useful for only some types of liability insurance. For example, employer liability insurance has successfully utilized a rating system. This might be due either to the availability of relatively complete records or to safeguards such as rigorous inspection procedures. On the other hand, the high administrative costs involved in implementing a truly personalized system of premium rating in automobile insurance militate against its use. See Brown, *supra* note 10, at 120; Johnson & Flanigan, *The Outlook for Insurance Rates Based on Driving Records*, 1975 INS. L.J. 35.

12. This excludes accidents involving defective automobiles which belong under the products liability analysis mentioned above.

13. In this regard, one commentator has written of the "partnership" between tort law and criminal law. See A. LINDEN, *CANADIAN NEGLIGENCE LAW* 480 (1972).

14. Sanctions may include loss of driving privileges.

15. See REPORT OF THE ROYAL COMMISSION ON CIVIL LIABILITY AND COMPENSATION FOR PERSONAL INJURY 210-11 (1978) [hereinafter cited as PEARSON REPORT]; see also ROYAL COMM'N OF INQUIRY, *COMPENSATION FOR PERSONAL INJURY IN NEW ZEALAND* ¶ 89 (1967) [hereinafter cited as WOODHOUSE REPORT].

defend (and settle)¹⁶ the action.

These observations lead naturally to the conclusion that deterrence should play a minor role in determining whether to abolish or modify tort law and replace it with a no-fault compensation system. Incentives for safer conduct should be left to criminal sanctions or administrative control¹⁷ or perhaps should be pursued within the injury compensation system through experience rating.¹⁸ Insofar as tort law deters through adverse publicity or education, the same benefits could be achieved through other means.¹⁹

Over the past ten years, much of the discussion about the merits of no-fault compensation has focused on the system adopted in New Zealand.²⁰ There are a number of reasons why this plan has attracted so much attention. First, the system comprehensively covers *all* personal injury caused by accident—whether on the road, at work, in the home, or elsewhere. Second, a government corporation provides the benefits, which are funded in such a way as to create significant externalities. Third, the system has completely replaced the common law action for personal injury caused by accident.²¹

These facts make it interesting to compare accident compensation in New Zealand with other common law jurisdictions that retain traditional tort actions for most personal injury cases.²² In the same vein, comparing automobile accidents in New Zealand before 1974 with those after 1974, when the common law action was replaced, might furnish some useful insight into the two competing systems.²³ In this Article, I propose

16. As to the high percentage of cases settled in the United Kingdom, see PEARSON REPORT, *supra* note 15, at 25.

17. Under New Zealand's Accident Compensation Scheme, safety is handled by an extensive program of education, research, and related efforts. See Brown, *supra* note 10, at 138.

18. Monroe Berkowitz has recommended such a rating system for work accidents. M. BERKOWITZ, *THE ECONOMICS OF WORK ACCIDENTS IN NEW ZEALAND 195-98* (1979). But see *supra* note 11.

19. See Brown, *supra* note 10, at 121-22; cf. Fleming, *supra* note 1, at 133-35.

20. Resembling in its general philosophy the WOODHOUSE REPORT, *supra* note 15, New Zealand's controversial system was implemented in 1974 by the Accident Compensation Act of 1972, [1972] 1 N.Z. Stat. 521. The legislation and subsequent amendments have been consolidated and reprinted as Accident Compensation Act 1982, [1982] 3 N.Z. Stat. 1552. The general features of accident compensation in New Zealand since the passage of the Accident Compensation Act of 1972 are discussed in A. BLAIR, *ACCIDENT COMPENSATION IN NEW ZEALAND* (1978); J. FAHY, *ACCIDENT COMPENSATION COVERAGE: THE ADMINISTRATION OF THE ACCIDENT COMPENSATION ACT 1972* (6th ed. 1982); and T. ISON, *ACCIDENT COMPENSATION: A COMMENTARY ON THE NEW ZEALAND SCHEME* (1980).

21. Accident Compensation Act 1982, § 27, [1982] 3 N.Z. Stat. 1552, 1578.

22. The comparison is valuable even though some of these common law jurisdictions have adopted no-fault schemes for work accidents.

23. Indeed, several empirical studies have suggested that, at least in the area of automobile accidents, the curtailment of tort rights in favor of a no-fault system for personal injuries has had a demonstrably adverse effect on accident rates. See, e.g., Grayston, *Deterrence in Automobile Liability Insurance—The Empirical Evidence*, 40 *INS. COUNS. J.* 117 (1973); Landes, *Insurance, Liability,*

to determine, based on the available data about accident trends, whether any significant changes in driving habits have occurred since the introduction of the no-fault system in New Zealand. If, for a given category of accidents, no significant changes occurred after 1974, it might suggest that the abolition of tort rights and the externalization of some accident costs did not affect motorist behavior.²⁴ In turn, such a finding would call into question the deterrence rationale of a system based on tort rights. On the other hand, an increase in accidents would suggest that the existence of tort rights served to deter accident-causing behavior on the part of motorists.

Of the various categories of tort liability, the only one for which valid statistics are available is automobile accidents.²⁵ The basis for collecting information in that area has remained largely the same throughout the period under study. This comparison between the pre-1974 system based upon tort rights and the post-1974 system based upon a no-fault concept is therefore drawn only from the data concerning automobile accidents.

I

NEW ZEALAND INJURY COMPENSATION— THE TWO SYSTEMS

To analyze accurately the information on automobile accident trends in New Zealand, one must first understand the injury compensation systems prevailing before and after 1974.

A. *The Pre-1974 Tort System*

Before 1974, a person injured in a motor vehicle accident had a right of action against any person who had negligently or intentionally caused the injury. The standard for liability, failure to exercise reasonable care, broadly paralleled that which now applies in most North American jurisdictions. In those cases that proceeded to trial, a jury most often heard the dispute. Juries awarded damages for both economic and nonpecuniary loss, although the amounts awarded for nonpecuniary losses were

and Accidents: *A Theoretical and Empirical Investigation of the Effect of No Fault Accidents*, 25 J.L. & ECON. 49 (1982).

24. See *infra* notes 57-68 and accompanying text for a discussion of factors other than the abolition of tort rights that might have also affected accident rates.

25. It was not possible, for a variety of reasons, to extend the analysis to tort liability other than that arising from automobile accidents. For products liability, for example, no information was available; there are no systematic records documenting injuries arising from defects in products, either before or after 1974. Nor were records concerning the incidence of injuries stemming from medical malpractice kept before 1974. Finally, although there are some data on the number and kinds of industrial injuries both before and after 1974, no useful comparisons can be drawn because the basis for reporting such injuries changed with the introduction of accident compensation.

significantly lower than those common in the United States at the time.²⁶

Presumably, this system represented some degree of internalization of the accident costs attributable to motoring. Motorists' insurance paid for damages arising from both wage loss and nonpecuniary loss. Even then, however, considerable externalities existed. In addition to heavily subsidizing medical expenses (particularly hospital and pharmaceutical costs), the social security system provided unemployment benefits to those too severely injured to work. Consequently, where victims, themselves "internal" participants in the activity of motoring, had no tort claim, many of their accident costs were externalized.²⁷ Furthermore, victims who suffered their injuries "in the course of employment" and who were unable to sue a tortfeasor were entitled to workers' compensation benefits.

Regarding individual incentives, two special characteristics of the system are of particular relevance. First, New Zealand law embraced a form of comparative negligence.²⁸ The contributory negligence of the plaintiff did not defeat his claim completely; it merely resulted in a proportionate reduction in the damages awarded. If the tort system did operate as an incentive for individuals to take greater care, the fact that contributory negligence no longer acted as a complete bar to recovery would tend to strengthen its deterrent effect, since the chance of a potential tortfeasor escaping liability completely would be greatly reduced. Second, New Zealand required motorists to carry compulsory liability insurance, with unlimited coverage, against claims for personal injury or death.²⁹ As previously discussed, this requirement would tend to reduce the force of the incentive represented by the threat of tort liability.³⁰ Liability insurance for property damage, however, was entirely optional.

Insurers also operated a system of "no claims" bonuses for both property and comprehensive coverage. If the motorist made no claims during the year against any part of his policy, the motorist's premium for the following year was reduced by a substantial margin.³¹ Even where

26. See Franklin, *Personal Injury Accidents in New Zealand and the United States: Some Striking Similarities*, 27 STAN. L. REV. 653, 667 n.90 (1975).

27. In theory at least, the collateral benefit rule meant that tort damages, when available, could not generally be adjusted on account of welfare payments. The cost of motoring would therefore continue to reflect these costs in such cases.

28. Given effect by the Contributory Negligence Act 1942, [1942] 2 N.Z. Stat. 29, the doctrine was, ironically, called "Contributory Negligence."

29. Transport Act 1962, § 79, [1962] 2 N.Z. Stat. 919, 975-76. A limit was subsequently placed, however, on liability for injuries to guests and paying passengers. Transport Amendment Act 1963, § 5, [1963] 1 N.Z. Stat. 542, 544-46.

30. Where accidents involved only property damage, claims would be settled by insurers either by waiving subrogation rights, or by obtaining recovery from the driver at fault. In addition, the administrative agency that set premiums made no provision for experience rating.

31. By avoiding damage both to his own vehicle and that payable to a third party, a driver

there was a claim against the insured for property damage, the bonus remained if another party was at fault.³² Thus, the tort-insurance system provided a direct incentive to avoid accidents: if an insured driver incurred no liability during the previous year, he would save substantially on insurance premiums. The effect of this incentive remains uncertain, however. Insurers often made the determinations of fault informally, without regard to the civil law negligence standard, instead comparing the established facts with the quasi-criminal traffic laws.³³ Under this informal standard, it was possible that a motorist who had not been at fault in the traditional sense (e.g., because he did not *cause* the accident) could still lose his bonus if the insurer judged him at fault (e.g., because the motorist had been speeding).³⁴ Nevertheless, the no-claim bonus mechanism did serve some deterrent function. Its existence meant that a motorist who damaged the property of a third party while breaching a traffic regulation faced an additional "fine."³⁵ In this way, the tort system bolstered the regulatory system. The existence of no-claim bonuses remains an important factor today, since the Accident Compensation Act only abolished tort rights for accidental personal injury or death,³⁶ and not for property damage. Thus, the no-claim bonus system should still play a significant role in our comparison between the pre- and post-1974 regimes.

B. *The Post-1974 No-Fault System*

In 1974, New Zealand implemented the Accident Compensation Act. This system has been described in depth elsewhere,³⁷ and a summary of its provisions relating to motor vehicle accidents will prove sufficient for our purposes. A person injured (or the dependents of a person killed) in an automobile accident may no longer bring a tort action for damages even if another person caused the accident. Instead, a victim,

could earn a bonus up to 40% of the previous year's premium (depending on his age and previous record).

32. This information was provided by the S.I.M.U. Insurance Office in Dunedin, New Zealand.

33. This information also came from the S.I.M.U. Insurance Office.

34. For a discussion of the lack of correlation between violations of traffic laws and accident-causing behavior, see Cramton, *Driver Behavior and Legal Sanctions: A Study of Deterrence*, 67 MICH. L. REV. 421, 435 (1969).

35. Inasmuch as drivers at fault are often not convicted—or for that matter, even prosecuted—this might prove the only "fine" in some cases.

36. See *supra* text accompanying note 20. Some tort actions, such as one involving punitive damages for abuse of official authority, appear to have survived. See G. PALMER, COMPENSATION FOR INCAPACITY 271-78 (1979).

37. See, e.g., G. PALMER, *supra* note 36; see also Dahl, *Injury Compensation for Everyone?—The New Zealand Experience*, 53 J. URB. L. 925 (1976); Harris, *Accident Compensation in New Zealand: A Comprehensive Insurance System*, 37 MOD. L. REV. 361 (1974); Palmer & Lemons, *Toward the Disappearance of Tort Law—New Zealand's New Compensation Plan*, 1972 U. ILL. L.F. 693.

whether at fault or not, must apply to a government body, the Accident Compensation Corporation, for compensation. The Corporation provides virtually all medical, rehabilitation and funeral expenses, plus income replacement equal to eighty percent of the income actually lost.³⁸ In addition, an amount of nonpecuniary compensation (modest by tort standards) is available for physical disability, loss of enjoyment of life and pain and suffering.

Prior to 1982, the funding of compensation for motor accident victims came from two sources. If the victim happened to be an earner and was injured in the course of employment, his compensation was paid from a fund financed by levies paid by employers and self-employed people. For all other victims, the money came from the motor vehicle fund paid for mostly by owners of vehicles as part of the annual registration fee and, to a small extent, by owners as part of their license fee.³⁹ This funding system meant that some of the accident costs of motoring, previously internalized to that activity, were externalized. Prior to the implementation of the accident compensation scheme, people injured in motor accidents while working could recover damages in tort from any other motorist at fault notwithstanding that they could have claimed instead under the then-existing workers' compensation plan. The accident costs represented by such damages were therefore borne by the automobile liability insurers (and thereby internalized to the activity of motoring). Under accident compensation, until 1982, such costs were borne by employers and the self-employed.

An indication of the extent of this externalization is provided by the rates charged to motorists over the relevant period. From 1974 to 1983, a period of high inflation in New Zealand, the levy on automobile owners remained relatively stable. Over that time it increased from \$11.35 per year to only \$14.20. In 1982, effectively the end of the period under study in this paper, the funding basis was changed so that all automobile injuries were compensated from the motor vehicle fund.⁴⁰ One result of this change was a fifty percent increase in the levy rates in 1984.⁴¹

A further relevant point concerning funding is that, although there is statutory authority for individual motorists to be variably rated

38. This remedy is limited to a maximum of \$700 per week (as of June 1984). This compares favorably with the average New Zealand weekly income of between \$200 and \$300 per week.

39. As of June 1984, the amount of accident levy was \$21.55 for the owner of a private automobile, *Otago Daily Times*, May 17, 1984, and the amount levied against each driver's license fee was \$2.

40. The initial funding provisions may be found in Accident Compensation Act 1972, § 97(2)(b), [1972] 1 N.Z. Stat. 521, 609; *id.*, § 33, [1972] 1 N.Z. Stat. at 550. The new funding provision is contained in Accident Compensation Act 1982, § 19(2)(b), [1982] 3 N.Z. Stat. 1552, 1575-76.

41. See *supra* note 39.

according to accident experience,⁴² this has never been done.

In considering, both the pre- and post-1974 periods, one must remember that a sophisticated system of traffic regulations and policing was continuously in effect.⁴³ This regulatory system is an important factor in any deliberations about accident trends—particularly where changes in rules or requirements have occurred.

II

STATISTICAL COMPARISON OF AUTOMOBILE ACCIDENTS UNDER THE TORT AND NO-FAULT SYSTEMS

The following statistical information comes from official, published sources. In many cases, figures were only available up to 1981 or 1982. This analysis, therefore, compares (1) the eight- or ten-year period prior to 1974 and (2) the period from 1974 to 1980 or 1981.

Initially, we must determine whether the externalization of a significant proportion of the accident costs attributable to motoring has had any impact on the system. According to economic theory, a decrease in motoring costs should produce an increase in motoring. Additionally, a decrease in the "insurance," portion of the cost of owning an automobile should produce an increase in the number of automobile owners. Table 1 sets out the number of registered motor vehicles per capita in New Zealand for the years 1964 through 1980.

*Table 1. Registered Motor Vehicles per Head of Population.*⁴⁴

TABLE 1

Year	Ratio	Year	Ratio	Year	Ratio
1964	0.37	1970	0.42	1976	0.52
1965	0.38	1971	0.44	1977	0.52
1966	0.39	1972	0.45	1978	0.53
1967	0.39	1973	0.48	1979	0.55
1968	0.40	1974	0.49	1980	0.56
1969	0.41	1975	0.50		

Figure 1 sets out the same information in graph form.

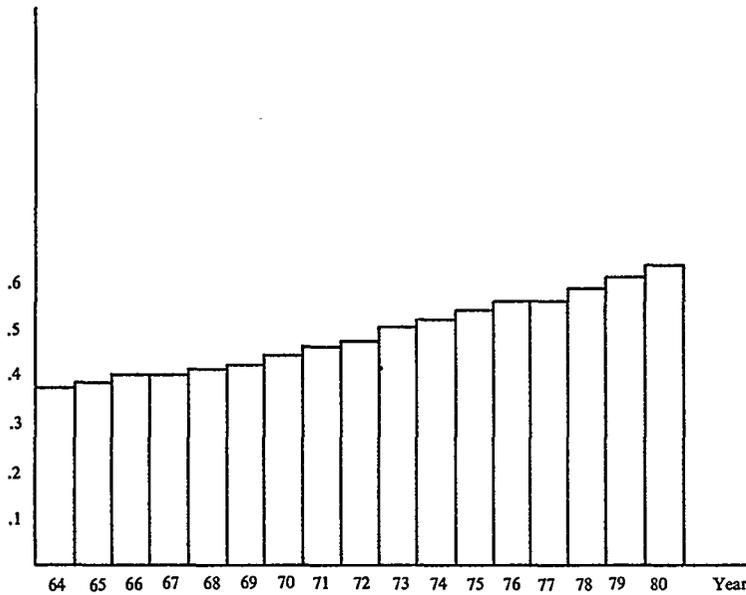
42. Accident Compensation Act 1982, § 49(d), 1982 [3] N.Z. Stat. 1552, 1604; Accident Compensation Act 1972, § 100(d), 1972 [1] N.Z. Stat. 521, 612.

43. I have tried to keep this in mind during my analysis; I have noted important developments in the regulatory system, and have tried to incorporate them into my calculations.

44. Source: NEW ZEALAND MINISTRY OF TRANSPORT, MOTOR ACCIDENTS IN NEW ZEALAND, STATISTICAL STATEMENT 8 (1982).

Figure 1. Registered Motor Vehicles per Head of Population.⁴⁵

FIGURE 1



These data indicate a steady increase in motor vehicle registration through the years examined, an effect most probably attributable to a wealth effect. More importantly for our purposes, however, no significant change in this pattern occurred in or after 1974 when New Zealand introduced its no-fault system.

Isolating accident figures, Table 2 sets out the number of motor vehicle accidents involving injury or death, the number of people killed and the number of people injured as a result of the accidents for the years 1964 to 1982.

45. Source: Table 1; *see supra* note 44.

Table 2. *Accident and Casualty Statistics 1964-80.*⁴⁶

TABLE 2

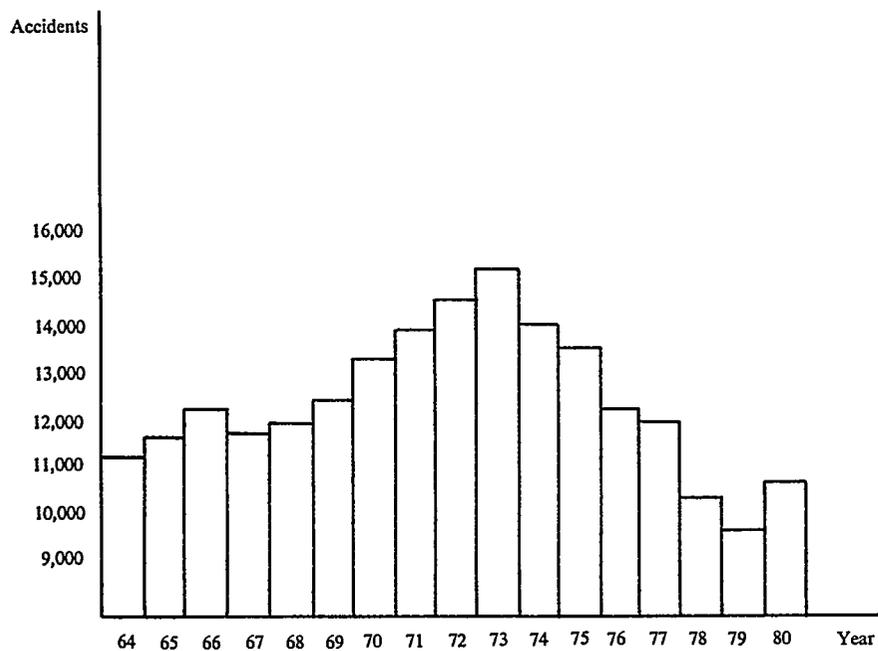
Year	Number of accidents	Number Killed	Number Injured
1964	11336	428	16266
1965	11871	559	17093
1966	12484	549	18194
1967	11947	570	17409
1968	12065	522	17698
1969	12554	570	18726
1970	13300	655	20791
1971	14004	677	21607
1972	14654	713	22315
1973	15571	843	23385
1974	14109	676	20829
1975	13730	628	19839
1976	12321	609	17895
1977	12068	702	17525
1978	10384	654	15178
1979	9714	554	13903
1980	10787	596	15957

Figures 2, 3 and 4, based on the data set forth in Table 2, illustrate a general downward trend in all accidents causing death or injury since 1973. The fatality figures reflect this same downward trend; and despite the fluctuations since 1976, the number of deaths annually due to automobile accidents has never approached the number recorded in 1973.

46. Source: NEW ZEALAND MINISTRY OF TRANSPORT, *supra* note 44, at 8.

Figure 2. Accidents Involving Death or Injury 1964-80.⁴⁷

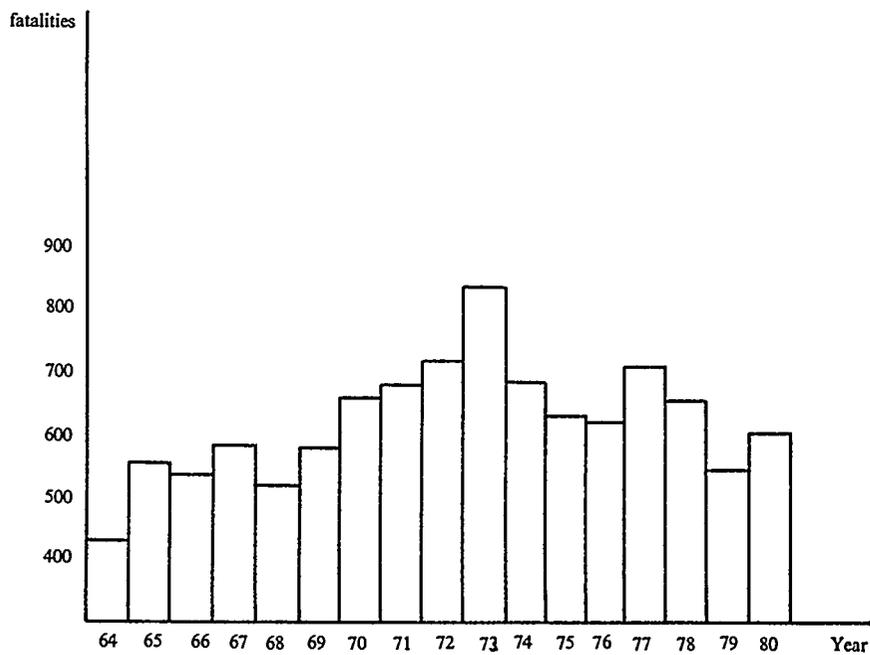
FIGURE 2



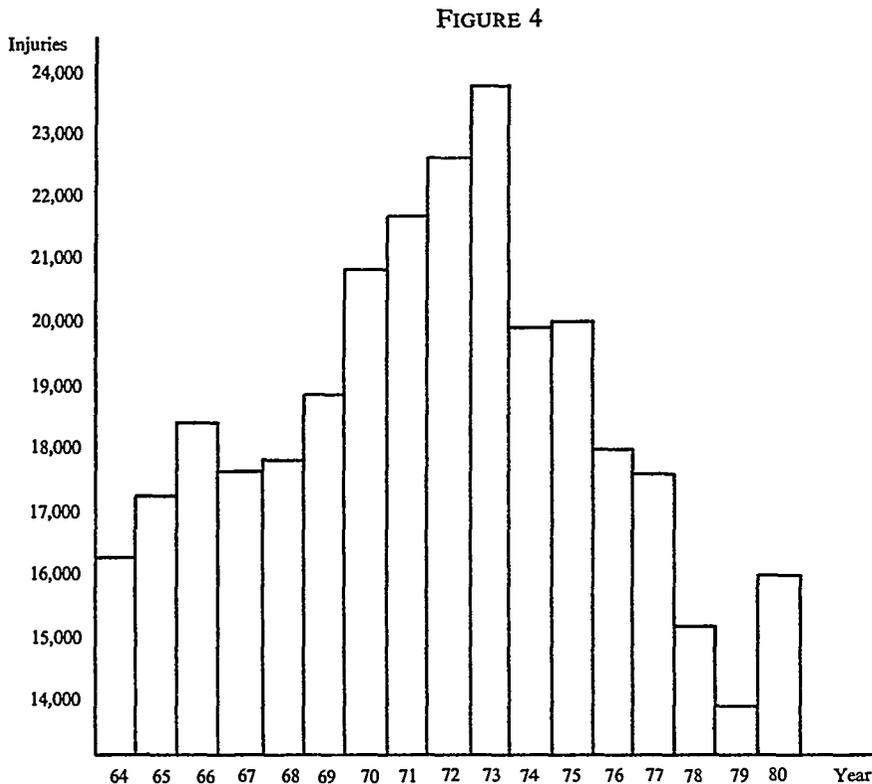
47. Source: Table 2; see *supra* note 46.

Figure 3. Road Accident Fatalities 1964-80.⁴⁸

FIGURE 3



48. Source: Table 2; see *supra* note 46.

Figure 4. Road Accident Injuries 1964-80.⁴⁹

Several factors combine to explain this general decline in the absolute number of accidents, injuries, and deaths since the 1973 peak. Inasmuch as all of its oil supplies were imported at the time, New Zealand was particularly hard hit by the 1974 world oil crisis. The crisis caused a dramatic increase in the price of gasoline which, predictably, led to lower consumption and less motoring. In addition, as a fuel conservation measure, the government reduced the open-road speed limit from fifty-five miles per hour to fifty miles per hour. This reduction alone may have resulted in fewer accidents. The government later adopted additional conservation measures. For example, gasoline sales on weekends were prohibited from February 27, 1979 to August 29, 1980. Furthermore, automobiles could not be operated on one day per week⁵⁰ from July 1, 1979 to May 13, 1980. These measures produced a reduction in total miles driven, which the accident figures and particularly the fatality figures reflect.

The following table sets out the estimated annual distance travelled

49. Source: Table 2; see *supra* note 46.

50. The owner picked the day of the week, which was then identified by a colored sticker.

by motor vehicles. The method of calculating these figures, taken from Ministry of Transport publications,⁵¹ changed in 1978: before 1978, the estimate originated from statistical returns made by transport operators, as well as from fuel consumption using average fuel consumption figures; since 1978, they have been calculated by a regression formula using fuel usage, vehicle registration, and population statistics.

*Table 3. Total Vehicle Kilometers Travelled 1966-80.*⁵²

TABLE 3

<u>Year</u>	<u>Vehicle Km. Travelled (Millions)</u>
1966	11,230
1967	11,630
1968	11,938
1969	12,610
1970	13,433
1971	13,342
1972	15,548
1973	16,749
1974	17,318
1975	16,874
1976	16,941
1977	16,824
1978	17,378
1979	16,648
1980	16,545

Given the variations in the amount of motoring from year to year, one must adjust the absolute accident figures to reflect kilometers driven. A comparison of such figures for each of the years under study produces a more appropriate picture of accident trends. Table 4 illustrates the trend in total accidents, total casualties, and total fatalities per hundred million kilometers travelled.

51. NEW ZEALAND MINISTRY OF TRANSPORT, *supra* note 44, at 9 (calendar year).

52. Source: *id.*

Table 4. Accidents, Casualties, and Fatalities per Hundred Million Vehicle Kilometers 1966-80.⁵³

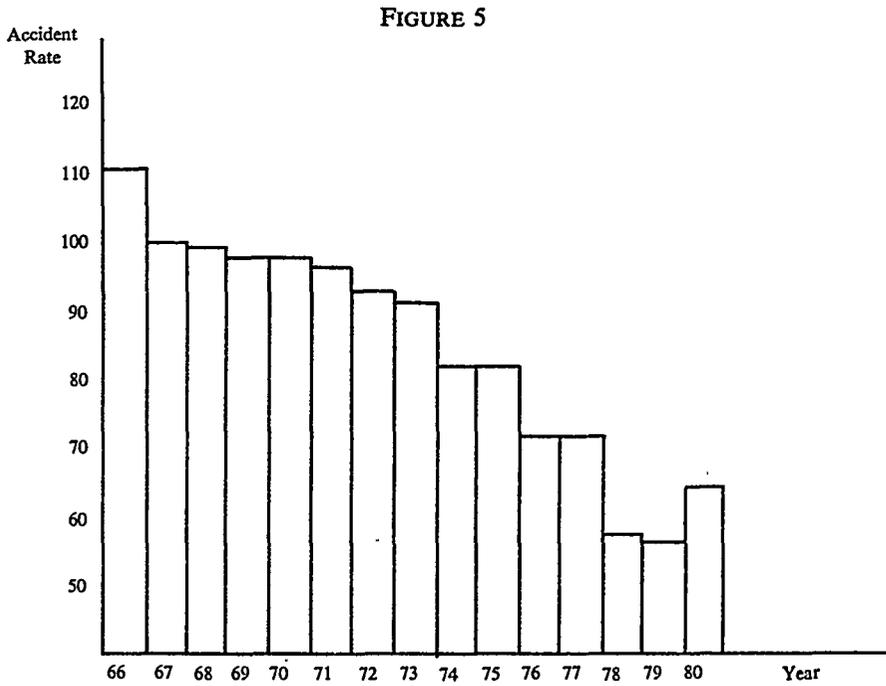
TABLE 4

Year	Accidents	Total Casualties	Killed
1966	111.2	166.9	4.9
1967	102.7	154.6	4.9
1968	101.1	152.6	4.4
1969	99.6	153.0	4.5
1970	99.0	159.7	4.9
1971	97.6	155.4	4.7
1972	94.3	148.1	4.6
1973	93.0	144.7	5.0
1974	81.5	124.2	3.9
1975	81.4	121.3	3.7
1976	72.7	109.2	3.6
1977	72.7	108.3	4.2
1978	59.8	91.1	3.8
1979	58.3	86.8	3.3
1980	65.2	100.0	3.6

Presentation of these data in graphic form demonstrates the trends.

53. Source: *Id.*

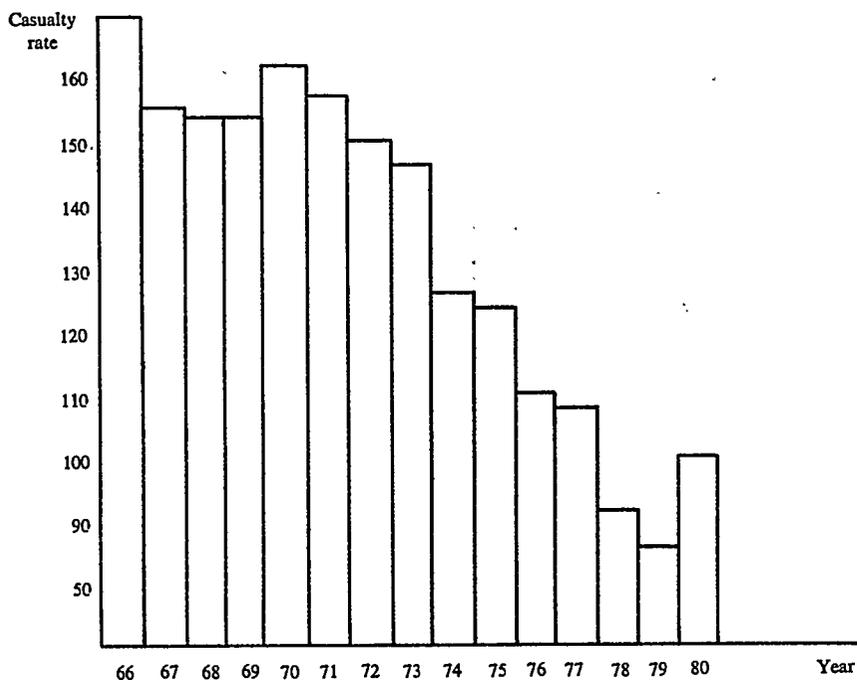
Figure 5. Accidents per Hundred Million Vehicle Kilometers 1966-80.⁵⁴



54. Source: Table 4; *see supra* note 53 and accompanying text.

Figure 6. Total Casualties per Hundred Million Vehicle Kilometers
1966-80.⁵⁵

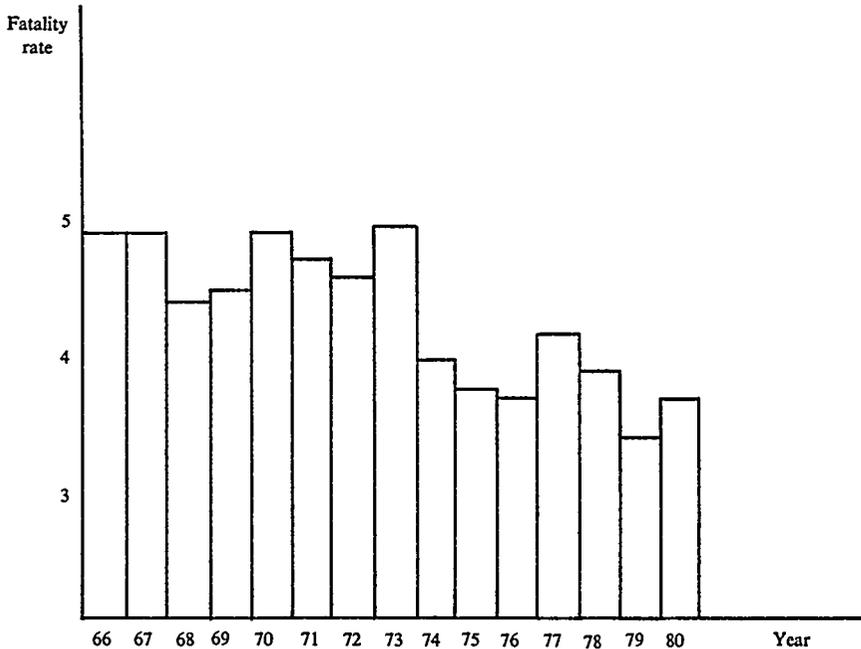
FIGURE 6



55. Source: Table 4; see *supra* note 53 and accompanying text.

Figure 7. Fatalities per Hundred Million Vehicle Kilometers 1966-80.⁵⁶

FIGURE 7



Each of the graphs shows that between 1974 and 1980 the accident rate and the casualty rate both continued to decline. Even a modest increase in these two rates in 1980 still left them considerably lower than in any year prior to 1974. Although the fatality rate has been more erratic, all years after 1974 have had a significantly lower fatality rate than pre-1974 years. This analysis shows no evidence that the removal of personal injury tort rights in 1974 marked an upswing in accident, injury or fatality rates. In fact, the downward trends—already noticeable in 1974—have continued.⁵⁷

III

FACTORS OTHER THAN THE CHANGE TO A NO-FAULT LIABILITY SYSTEM THAT MAY HAVE AFFECTED ACCIDENT RATES IN NEW ZEALAND

A. Changes in Motoring Laws

Adoption of a no-fault system has not been the only change in motoring laws that may have affected accident rates. In 1973, for exam-

56. Source: Table 4; *see supra* note 53 and accompanying text.

57. Although between 1978 and 1979 the rate rose back to the 1974 level, it dropped again in 1979.

ple, the open-road speed limit was reduced to fifty miles per hour.⁵⁸ That same year safety helmets became compulsory for motorcyclists and passengers, at all speeds.⁵⁹ Previously, they had been compulsory only if the vehicle was travelling in excess of thirty miles per hour. In 1972, the government introduced compulsory fitting and wearing of safety belts for drivers of, and front seat passengers in, most classes of vehicles registered since 1965.⁶⁰ In 1975, the government extended these seat belt requirements to motor vehicles registered on or after January 1, 1955,⁶¹ and, in 1979, to cover all persons over seven years of age.⁶² In 1977, a new set of traffic regulations took effect.⁶³ These regulations included new rules dealing with the right of way at intersections as well as measures designed to clarify the obligations of drivers and others. Another regulation enacted in 1977 required the installation of safety glass for the windows of new vehicles and for the replacement of windows in existing vehicles.⁶⁴

In 1978, two changes were made in the laws regarding the use of the breathalyzer to test the level of a driver's intoxication. First, the use of the breath sample for evidentiary purposes was permitted even in the absence of a blood test. Second, the permissible blood alcohol level was reduced from 100 milligrams of alcohol per 100 milliliters of blood to 80 milligrams per 100 milliliters. In addition, once a person had his license revoked, it became more difficult for him to obtain a limited license.⁶⁵

No doubt these changes in the law have reduced the number and severity of road accidents. The seat belt requirement alone has probably helped prevent fatalities.⁶⁶ And, although it is probably impossible to determine the precise impact these measures have had on the deterrence effect,⁶⁷ some of these factors most certainly have contributed to the reduction in accident rates. If none of the various measures implemented since 1973 had been taken, the rates would have probably remained more

58. Transport (Motor Spirits Conservation) Regulations, [1973] 3 N.Z. Stat. Regs. No. 283, at 1743.

59. Traffic Regulations 1956, Amendment No. 26, Regulation 6, [1973] 3 N.Z. Stat. Regs. No. 316, at 2065, 2067.

60. Traffic Regulations 1956, Amendment No. 22, [1972] 1 N.Z. Stat. Regs. No. 83, at 259.

61. Traffic Regulations 1956, Amendment No. 28, [1974] 3 N.Z. Stat. Regs. No. 273, at 1764.

62. Traffic Regulations 1976, Amendment No. 2, [1978] 3 N.Z. Stat. Regs. No. 301, at 1259.

The relevant age had been 15 years.

63. Traffic Regulations 1976, [1976] 3 N.Z. Stat. Regs. No. 227, at 1259.

64. *Id.*, Regulation 73, at 1302.

65. Transport (Breath Tests) Notice, [1978] 3 N.Z. Stat. Regs. No. 310, at 1300.

66. Green & Sharpe, Seat Belt Legislation, (paper presented at 23rd annual conference of the American Association for Automobile Medicine, 1979) (on file with the *California Law Review*).

67. Factors such as education, improvement in car design and road design from the point of view of safety, and increased enforcement activity by police all have some effect, as does the pressure of fuel prices. Determining the relative importance of each would indeed seem to be impossible. *See, e.g., Road Death Toll Shows Drastic Drop*, London Free Press, July 14, 1973, at A11.

or less constant. Of course, this conclusion cannot absolutely be proved one way or the other. What can be stated unequivocally, nevertheless, is that during this period, the accident rate decreased.

B. Changes in Policing Activity

In addition to the examination of the figures concerning accident rates, an examination of the results of policing activity during the relevant years should provide some useful insight for our comparison. Once deterrence is removed, the traditional view would predict that motorists would act more recklessly, whether or not this behavior resulted in more accidents. Such an increase in dangerous behavior behind the wheel should be reflected in police statistics detailing convictions for dangerous conduct. While not entirely conclusive, an examination of police statistics concerning convictions for those offenses related to accident-causing conduct for the years in question should prove helpful.⁶⁸ Assuming conviction rates remained more or less constant before and after 1974, it appears that no significant change in accident-causing behavior has occurred. The data in Table 5 include conviction figures for reckless driving, drunk driving, and speeding offenses.⁶⁹

Once again, the *rate* of convictions calculated by relating the total in each year to the total vehicle kilometers travelled provides the most useful comparison. For further comparison, I calculated a figure representing the number of convictions per thousand vehicles registered.

68. Any change in the conviction rate may, of course, be attributable to an increase or decrease in police activity: for example, periodic "blitzes" on speeding motorists or drunk drivers.

69. The data in Table 5 represent convictions for the following offenses: (1) reckless, dangerous, or careless use of, or driving of, a motor vehicle resulting in death or injury; (2) driving or having control of a motor vehicle while under the influence of alcohol or drugs resulting in death or injury; (3) driving or having control of a motor vehicle or other vehicle while under the influence of alcohol or drugs; (4) exceeding the speed limit; (5) reckless, dangerous, careless or inconsiderate use of, or driving of, a motor vehicle. These convictions were recorded in the District Courts (formerly the Magistrates' Courts) in New Zealand from 1964 to 1980.

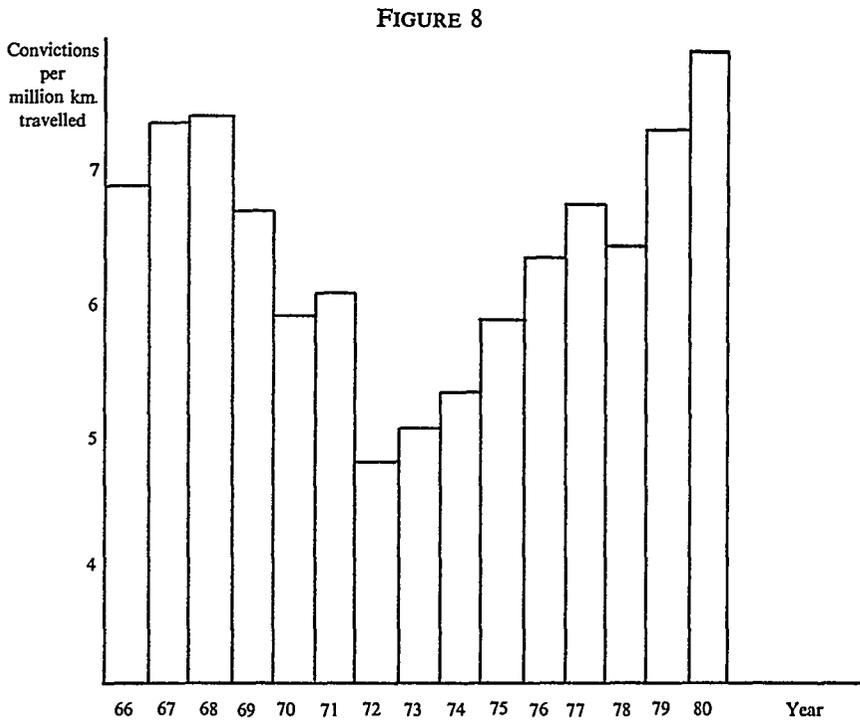
Table 5. District Court Convictions for Moving Traffic Violations per Million Kilometers Travelled and Thousand Vehicles Registered 1966-1980.⁷⁰

TABLE 5

Year	Rate per million km	Rate per 1000 vehicles
1966	6.80	72.00
1967	7.28	77.85
1968	7.30	78.17
1969	6.60	72.40
1970	5.85	65.02
1971	6.09	68.67
1972	4.69	54.04
1973	4.96	57.75
1974	5.24	

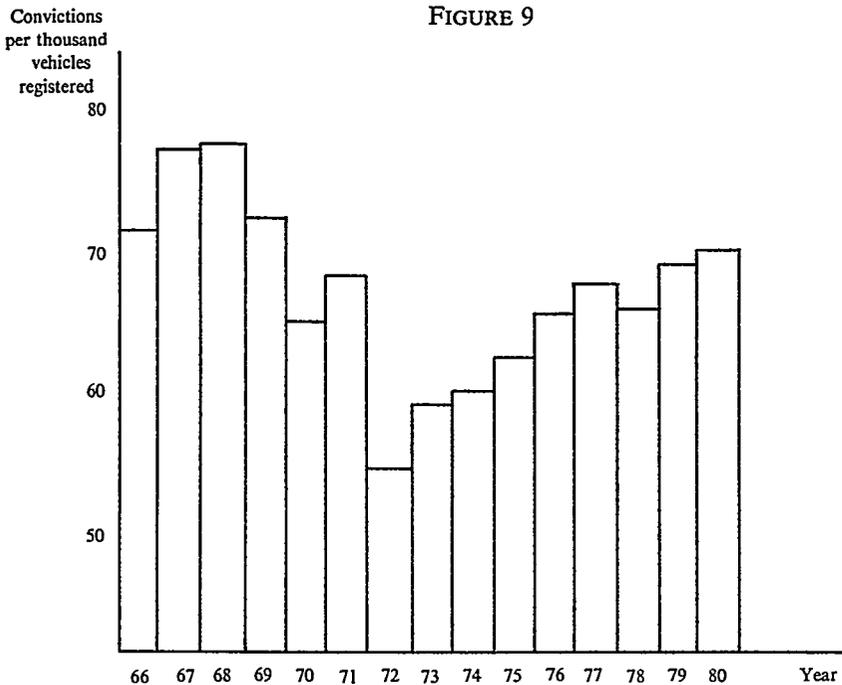
70. Sources: NEW ZEALAND DEP'T OF STATISTICS, NEW ZEALAND OFFICIAL YEARBOOKS 1966-83 (for conviction figures); NEW ZEALAND MINISTRY OF TRANSPORT, *supra* note 44, at 9.

Figure 8. District Court Convictions for Moving Traffic Violations per Million Kilometers Travelled 1966-1980.⁷¹



71. Source: Table 5; see *supra* note 70.

Figure 9. District Court Convictions for Moving Traffic Violations per Thousand Vehicles Registered.⁷²



The graphic representation of Figures 8 and 9 demonstrates a steady increase in the conviction rate both in terms of kilometers travelled and vehicles registered since 1972. Assuming a constant level of policing activity, this increase may indicate a parallel increase in illegal (and presumably dangerous⁷³) behavior. Conversely, it may indicate a higher level of police activity—a factor which may itself account for the lower accident rate. In fact, further analysis of the figures reveals that after 1969, the increase in the conviction rate may be largely attributed to an increase in convictions for alcohol-related offenses. Prior to 1969, the percentage of convictions represented by alcohol-related offenses ranged between 1% and 1.5%. In 1969, upon the introduction of breath and blood alcohol tests,⁷⁴ the figure rose to 2.5%. In 1970, the figure jumped to 5.45%, and in 1971, 6.57%. Testing for the blood alcohol of accident victims admitted to hospitals became mandatory in 1971;⁷⁵ subsequently, from 1972 until 1977, the proportion of alcohol-related convictions ranged from 8.71% to 9.62%. In 1978, in addition to more stringent

72. Source: Table 5; see *supra* note 70.

73. Studies in the United States have found no correlation between speeding and accident involvement. See Crampton, *supra* note 34, at 436.

74. Transport (Breath Tests) Notice, [1969] 1 N.Z. Stat. Regs. No. 70, at 285.

75. Transport Amendment Act (No. 2), [1971] 3 N.Z. Stat. 1834.

breath testing, the maximum blood alcohol level was lowered.⁷⁶ Since enactment of these latest amendments, alcohol-related offenses accounted for 11.18% of convictions in 1978, 9.24% in 1979, and 10.73% in 1980.

Rather than indicating an increase in illegal and dangerous behavior, therefore, these increases in total convictions probably resulted from a more efficient system of detection and prosecution of a specific category of offenses.⁷⁷ In comparison to the increase in alcohol-related convictions, convictions for recklessness and for speeding have remained at a relatively constant level. Table 6 illustrates precisely this point. The figures in Table 6 were compiled by dividing the figure representing the number of millions of kilometers travelled in each year by the figures for the number of drunk driving offenses, speeding offenses, and reckless driving offenses in the same year. This compilation produces a figure representing the number of kilometers travelled for each conviction.

76. See *supra* note 65 and accompanying text.

77. A similar conclusion might be reached concerning the more modest increase in speeding convictions since 1971, when a new speeding infringement system was introduced. Transport (Speeding Infringements) Notice, [1971] 1 N.Z. Stat. Regs. No. 132, at 603. The increased use of radar detection at that time was no doubt another factor.

Table 6. *Millions of Kilometers Travelled for Each Drunk Driving, Speeding and Reckless Driving Conviction.*⁷⁸

TABLE 6

Millions of Kilometers Travelled for Each Conviction

Year	Drunk Driving Rate	Speeding Rate	Reckless Driving Rate
1966	12.4	0.23	0.41
1967	10.05	0.21	0.39
1968	8.34	0.21	0.39
1969	5.68	0.24	0.42
1970	3.13	0.29	0.46
1971	2.50	0.30	0.42
1972	2.34	0.47	0.46
1973	2.11	0.43	0.46
1974	2.00	0.41	0.44
1975	1.75	0.30	0.48
1976	1.80	0.28	0.43
1977	1.64	0.27	0.43
1978	1.40	0.28	0.47
1979	1.49	0.25	0.39
1980	1.22	0.23	0.39

Comparing the figures for reckless driving and speeding, it becomes evident that, unlike the drunk driving rate, the conviction rates for these other offenses have not increased dramatically during the years under consideration; in fact, except for peaking in the early 1970's, they have remained relatively constant.

CONCLUSION

New Zealand abolished the system of tort actions for personal injury damages in 1974. The new system created some obvious externalities, at least in regard to the costs of automobile accidents. The traditional view of the tort model suggests that the new system would produce: (1) an increase in motoring; and (2) an increase in the number and, in all probability, the severity of accidents. The available statistics, however, suggest exactly the opposite: (1) no significant increase in motoring activity (as represented by the number of vehicles registered and total kilometers driven) occurred; and (2) no noticeable increase in accident

78. Source: Table 3 (for kilometer figure) and NEW ZEALAND DEP'T OF STATISTICS, *supra* note 70 (for conviction figures).

rates. In fact, the predominantly downward trend in the number of accidents, deaths, and injuries that had started prior to 1974 continued and even accelerated after New Zealand adopted the Accident Compensation Act. Similarly, the number of accidents (as compared to total vehicle usage) continued a steady decline.

On the other hand, the total number of convictions for offenses involving potentially dangerous conduct continued an upward climb. When one takes into consideration the more effective measures adopted for dealing with alcohol-related offenses, however, even conviction rates have remained reasonably constant.

In conclusion, the removal of tort liability for personal injury in New Zealand has apparently had no adverse effect on driving habits. In fact, statistics show a decline in accident and fatality rates. Of course, the decrease in accident and fatality rates is probably attributable to deterrent measures, such as compulsory seat belt and safety helmet laws and stricter drunk-driving laws and enforcement measures. Although it will remain impossible to determine whether the reduction in accident rates would have been even greater if full tort rights had been retained to act as a silent "partner"⁷⁹ to changes in the traffic laws, clearly the removal of tort rights for personal injury cases did not produce the increase in accident-producing behavior predicted by the traditional theory of tort deterrence.

79. See A. LINDEN, *supra* note 13, at 480-82.