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

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**DETERRENCE IN TORT AND NO-FAULT:
THE NEW ZEALAND EXPERIENCE***

Craig Brown
University of Western Ontario
ECONOMICS AND LAW WORKSHOP
84-09

Thursday September 27, 1984

Time: 4:00 p.m.

Room: 4032 SSC

**CENTRE FOR
ECONOMIC ANALYSIS
OF PROPERTY RIGHTS**

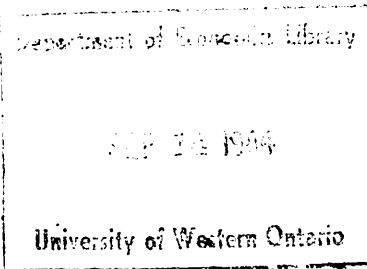


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Introduction

The question of deterrence continues to be prominent in debates about the effectiveness of negligence law in achieving socially useful goals.¹ It is a central matter in the deliberations of policymakers (and lobbyists) considering whether all or part of tort law should be replaced with no-fault welfare or insurance schemes.² That is certainly true in respect of no-fault automobile insurance proposals in North America.³ The traditional view was that the fear of the financial burden imposed on a defendant by a finding of tort liability served as an incentive for potential tortfeasors to avoid injury-causing activities or at least an incentive to conduct them with a greater regard for safety.⁴ More recent writing, heavily influenced by economic theory, has developed this view by regarding the deterrent role of negligence law as seeking, not so much the elimination of all injuries, as the achievement of an optimum level of injuries taking into account the social benefits of the activities which produce them.⁵

As it has been developed, this economic theory turns on the key concept of "internalization" of injury costs. If, by the operation of tort rules, an activity (such as "motoring") is charged with the costs of the injuries it causes (such costs thereby being internalized to that activity), the participants in the activity will be forced either (a) to determine whether it is

worthwhile continuing with the activity given the costs weighed against the benefits, or (b) to seek ways to reduce those costs, i.e. reduce the number and/or severity of the injuries caused. The result will be an efficient (in the sense of wealth maximizing) allocation of society's resources with respect to that activity.

On the other hand, if the system of injury cost allocation fails to charge all or some of the costs to the activity causing them, the activity is said to be "subsidized" by whatever other segment of society is bearing those costs. This is a misallocation of resources or inefficiency. The activity will continue without having to take injury costs into account. There will be more of the activity conducted than is warranted by its true cost and there will be an under-incentive to reduce accident costs.⁶

Applied to automobile accidents this economic model would suggest, assuming other factors remain constant, that as more of the costs of such accidents are externalized to the activity of motoring, the amount of motoring could be expected to increase at the expense of other, possibly more socially useful activities.

Tort liability can operate in the automobile accident context both to internalize the costs of motoring and to provide

deterrence incentives, in the traditional sense, to those involved in motoring. 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 at least some of these costs are brought home to motorists. Second, liability is imposed on those groups within the activity which are thought most likely to take effective measures to avoid accidents (the traditional idea of deterrence). Thus, negligent motorists are liable for the injuries they cause and manufacturers are liable for injuries caused by defective automobiles. Whether the rule is one of negligence or strict liability, there is an incentive to take cost-justified precautions.

The existence of liability insurance does not detract from the internalizing function of tort law because the costs of accidents, although spread widely, are nevertheless borne by motorists as a group. But, in terms of the traditional view of the deterrence function of torts, insurance surely does have an impact of injury-causing behaviour.⁸ Motorists in particular, often voluntarily but also often under some form of state compulsion, protect themselves against the worst effects⁹ of incurring liability. For this reason my intuitive view, as expressed elsewhere,¹⁰ is that the deterrent effect of negligence law (in the traditional sense) is minimal, at least in respect of automobile accidents.

However, even given the impact of liability insurance the deterrent effect of negligence law might well vary with different categories of cases. For example, in products liability or medical malpractice cases, findings of liability carry sanctions quite apart from any direct financial burden represented by the damage awards. I refer here to the adverse publicity which often attends litigation in those areas especially in cases involving well-known defendants.¹¹ In addition, in different types of accident cases there may be greater or lesser scope for insurers providing incentives of one type or another for their insureds to take steps to avoid liability. In the industrial sphere, for example, insurers can inspect places of work for hazards or safety-equipment and use the information gained as a basis for accepting an employer's liability risk or in setting premiums. Alternatively the insurer can establish an effective system of experience rating or penalties or bonuses which for reasons of administrative cost may be feasible for some kinds of liability insurance (e.g. for employers liability insurance,¹² but not for automobile liability insurance).¹³

On the other hand, in the area of automobile accidents (other than those involving defective automobiles) a different set of dynamics conceivably alters the deterrence picture completely. In terms of the theory of internalization it seems to me quite possible that motoring is so important to people that

they would be prepared to incur (perhaps substantially) higher costs before abandoning the activity. In terms of individual incentives to act more safely, the fact that accident-producing behavior carries the very real risk of injury to the potential defendant himself should, one would assume, operate as a potent deterrent in itself. Moreover, in this field more than most others, dangerous conduct commonly constitutes a criminal offence and the penal sanctions which apply if the actor is apprehended and convicted provide an additional incentive for safe conduct.¹⁴ If a motorist is not deterred by the threat of injury to himself and the threat of penal sanction (including the loss of driving privileges) it seems unlikely that he would be deterred by the further sanction of tort liability the worst consequences of which are absorbed by an insurer. Finally, the prospect of publicity attaching to a finding of liability (as opposed to a conviction in traffic court) especially given that the action will be defended (and probably settled)¹⁵ by an insurance company, does not seem to be a particularly frightening sanction in a world where accidents are commonplace and where moral blame is only occasionally attached to any of those involved.¹⁶

These observations and intuitive conclusions led me in turn to the view that deterrence should not be given great weight in determining whether tort law should be abolished or modified in favour of a no-fault compensation scheme. Incentives to safer conduct should be left to criminal sanctions or administrative

control¹⁷ or even pursued within the framework of the compensation scheme built through a system of experience rating.¹⁸ Insofar as tort law serves the function of deterrence through adverse publicity or education, that could be achieved through other means and should not by itself be sufficient justification for retaining the tort system.¹⁹

For the past ten years the focus of much of the discussion about the merits of no-fault compensation schemes as opposed to tort law has been the system adopted in New Zealand.²⁰ There are a number of reasons for this. Firstly, the scheme is comprehensive in that it covers all personal injury which has been incurred by accident, whether on the roads, at work, in the home or elsewhere. Secondly, the benefits are obtained from a government corporation and as I shall explain, are funded in such a way that significant externalities are created. Thirdly, the scheme has replaced totally the common law action for damages in respect of personal injury incurred by accident.²¹ It is this last fact in particular which makes accident compensation in New Zealand such an interesting study for purposes of comparison with other common law jurisdictions which still have traditional tort actions available in most personal injury cases.²² And so it is for me with my interest in deterrence.

As explained above, my conclusion about the deterrent value of tort was intuitive (and derivative of other largely

intuitive thinking). It occurred to me that a comparison of the New Zealand experience with accidents before and after 1974 when the common law action was replaced might support that original view or suggest that it needed to be revised. I was mindful too of the fact that some recent empirical studies elsewhere²³ have suggested that curtailment of tort rights in favor of a no-fault system for personal injuries caused in automobile accidents has had a demonstrably adverse affect on accident rates. I therefore set out firstly to determine what data about accident trends in New Zealand were available and secondly, whether they indicate any significant changes consequent upon the introduction of a no-fault accident compensation scheme at the expense of tort rights. I proposed to compare any figures for the eight or ten years prior to 1974 with those for the subsequent years allowing for various other factors which might be relevant. If, for a given category of accidents, such as road accidents, no significant changes occurred after 1974, that might suggest that the abolition of tort rights and the externalization of some accident costs had no adverse effect in terms of accident deterrence for that category. On the other hand an increase in accidents might suggest that the removal of tort rights meant a loss in terms of deterrence.

The first stage of this inquiry established that the only category for which any really valid statistics are available is automobile accidents. The basis for collecting information

in that area has remained largely the same throughout the period under study and it has been collected under numerous classifications which lend themselves to the type of analysis I proposed. No information seems to have been recorded in any systematic way about the incidence of accidental injury arising from defects in products, either before or after 1974.²⁴ Therefore my study had to exclude that category. Similarly, although there are figures available for cases of "medical misadventure" arising after 1974 which it is presumed would have been covered under the common law,²⁵ no reliable data exists on the incidence of such cases prior to that time.²⁶ That too had to be excluded. With respect to industrial injuries, the entire basis for reporting them has changed since the introduction of accident compensation. Unlike the old workers' compensation scheme, the accident compensation scheme covers self-employed people and all accidents incurred by workers en-route to and from their place of work. On the other hand, the new scheme does not cover loss of income for work accidents involving less than one week's lost time (employers must pay that directly). As a result the statistics for compensated injuries before 1974 are not comparable with those for the post-1974 period. There have, however, been some studies done relating to accidents in specific industries before and after 1974. While it is not necessary for me to reproduce those findings it is worth commenting on them from the perspective of the theme of this paper.

Therefore the second stage of my inquiry - and the subject of the rest of the paper - is restricted largely to automobile accidents although, in a postscript, I also refer to other studies which have been conducted concerning industrial injuries.

Automobile Accidents in New Zealand - The Two Systems

In order to analyse the information on automobile accident trends in New Zealand in the way intended it is necessary first to understand the systems prevailing before and after 1974 respectively. During the period under study prior to 1974 a person injured in a motor vehicle accident had a right of action against any person who was legally at fault in causing that injury. The standard for liability was that the defendant caused the injury intentionally or negligently, i.e. without exercising reasonable care. This standard of care was broadly similar to that which applies now in most North American jurisdictions. Jury trials were common in those cases which proceeded to litigation. Damages were awarded for both economic and non-pecuniary loss although in the latter category amounts were much lower than those common, even at that time, in the United States.²⁷

One can assume that this system represented some degree of internalization of the accident costs attributable to

motoring. Such items as wage loss in cases where liability was established were met out of insurance funded by motorists as a group. That is also true of non-pecuniary loss. However, there were, even then, considerable externalities. The social security system, as it still does, heavily subsidized medical (particularly hospital and pharmaceutical) expenses and provided unemployment benefits to those too severely injured to work. The result was that where victims, themselves "internal" participants in the activity of motoring, had no tort claim, many of their accident costs were externalized.²⁸ In addition, those road accident victims who suffered their injuries "in the course of employment" would have been entitled to workers' compensation benefits if they were not able to sue a tortfeasor.

In terms of any individual incentives provided by the system, two special characteristics of the system are of particular relevance to the present paper. First, there was what is known in the U.S. as comparative negligence.²⁹ The contributing negligence of the plaintiff did not defeat his claim completely; it merely resulted in a proportionate reduction in the damages ultimately payable. If the tort system did operate as an incentive for individuals to take greater care, the fact that contributory negligence was not a complete defence would tend to strengthen that deterrent effect. The other significant characteristic was the requirement of compulsory liability insurance against claims for personal injury or death with

unlimited coverage.³⁰ As discussed above, this would tend to reduce the force of the incentive represented by the threat of tort liability for causing personal injury or death. Moreover, premiums were set by an administrative agency which made no provision for experience rating.

However, with respect to property damage, liability insurance was optional and on this and comprehensive coverage the insurers operated a system of no-claims bonuses. If an insured motorist went for a year without any claims against any part of his policy (own vehicle damage or damages payable to third parties) his premium for the following year was reduced by a substantial margin - up to 40% depending on the age and previous record of the insured. If an insured had a claim but if it could be established to the insurer's satisfaction³¹ that another party was at fault, then the bonus was not lost.³² In this way the tort-insurance system did provide an incentive to avoid accidents. If an insured driver went for a year without incurring damage for which he was responsible he would gain a substantial saving in insurance premiums. But the exact significance of this is uncertain. Determinations of fault in this sense were generally made informally by insurers and then not directly against the civil law negligence standard. The assessment was made by measuring the established facts against the quasi-criminal traffic laws.³³ Therefore the situation could arise where a person was not at fault in the tort sense in that

he did not cause an accident but because he was in breach of say the speeding regulations he would still be judged at fault and lose his bonus.³⁴ It could be argued that the deterrent effect here is provided more by the traffic laws than by tort law. Nevertheless, the no-claim bonus mechanism did serve some deterrent function. Its existence meant that a motorist who caused damage to the property of a third party while breaching a traffic regulation faced the possibility of an additional "fine".³⁵ In this way the tort system bolstered the regulatory one. The existence of no-claim bonuses is an important factor in a comparison between the pre and post-1974 regimes because essentially the same system remains in place today. The Accident Compensation Act only abolished tort rights in respect of accidental personal injury or death.³⁶

The details of the new scheme have been set out often and at length elsewhere.³⁷ It is necessary here only to provide a summary of its provisions which relate to motor vehicle accidents. Persons injured or the dependents of persons killed in automobile accidents no longer have access to a tort action for damages even if some other person's fault can be established. Instead any victim, whether at fault or not, applies to a government body, the Accident Compensation Corporation, for compensation. This provides for virtually all medical, rehabilitation and funeral expenses plus income

replacement at the rate of 80% of that actually lost to a maximum of \$700 per week.³⁸ In addition, an amount of non-pecuniary compensation (modest by tort standards) is payable for physical disability according to a set schedule. If the victim happens to be an earner his compensation is paid from a fund financed by levies paid by employers and self-employed people. For all other victims the money comes from the motor vehicle fund which is paid for mostly by the owners of vehicles as part of the annual registration fee and, to a small extent, by drivers as part of their licensing fee.³⁹ There is statutory authorization for individual motorists to be variably rated according to accident experience⁴⁰ but this has never been acted upon. It is critical to note here that because many people injured in automobile accidents are also earners and thereby compensated from the employer-paid fund, a substantial portion of the costs of automobile accidents previously internalized to the activity of motoring (viz. those personal injury costs represented by tort damages or settlements) are now externalized. This is demonstrated by the fact that from 1974 to 1983, a period of high inflation in New Zealand, the levy on automobile owners increased from \$11.35 per year to only \$14.20.⁴¹

With respect to both the pre and post 1974 periods it is important to keep in mind the perhaps obvious fact that a sophisticated system of traffic regulations and policing has been and continues to be in place. This is an important ingredient in

deliberations about accident trends especially if there have been changes in rules or related factors. As will become apparent, I have tried to keep this in mind during the course of the exercise represented by this paper. Where I think important developments have occurred I have indicated as such and tried to incorporate them into my calculations.

Automobile Accidents - The Statistics

The following statistical information is all taken from official published sources. In most cases figures are available only to 1982 and often earlier. I am therefore seeking to compare (a) the eight or ten year period (depending on availability of data) prior to 1974 and (b) the period from 1974 to 1980 or 1981 inclusive.

The first step was to determine the impact, if any, of the externalization of a significant proportion of the accident costs attributable to motoring. The theoretical prediction would be that the decrease in motoring costs would produce an increase in motoring. More specifically, the decreases in the "insurance" portion of the cost of automobile ownership should result in an increase in the incidence of automobile ownership.

The following table sets out the number of registered motor vehicles per head of population in New Zealand for the years 1964 through 1980.

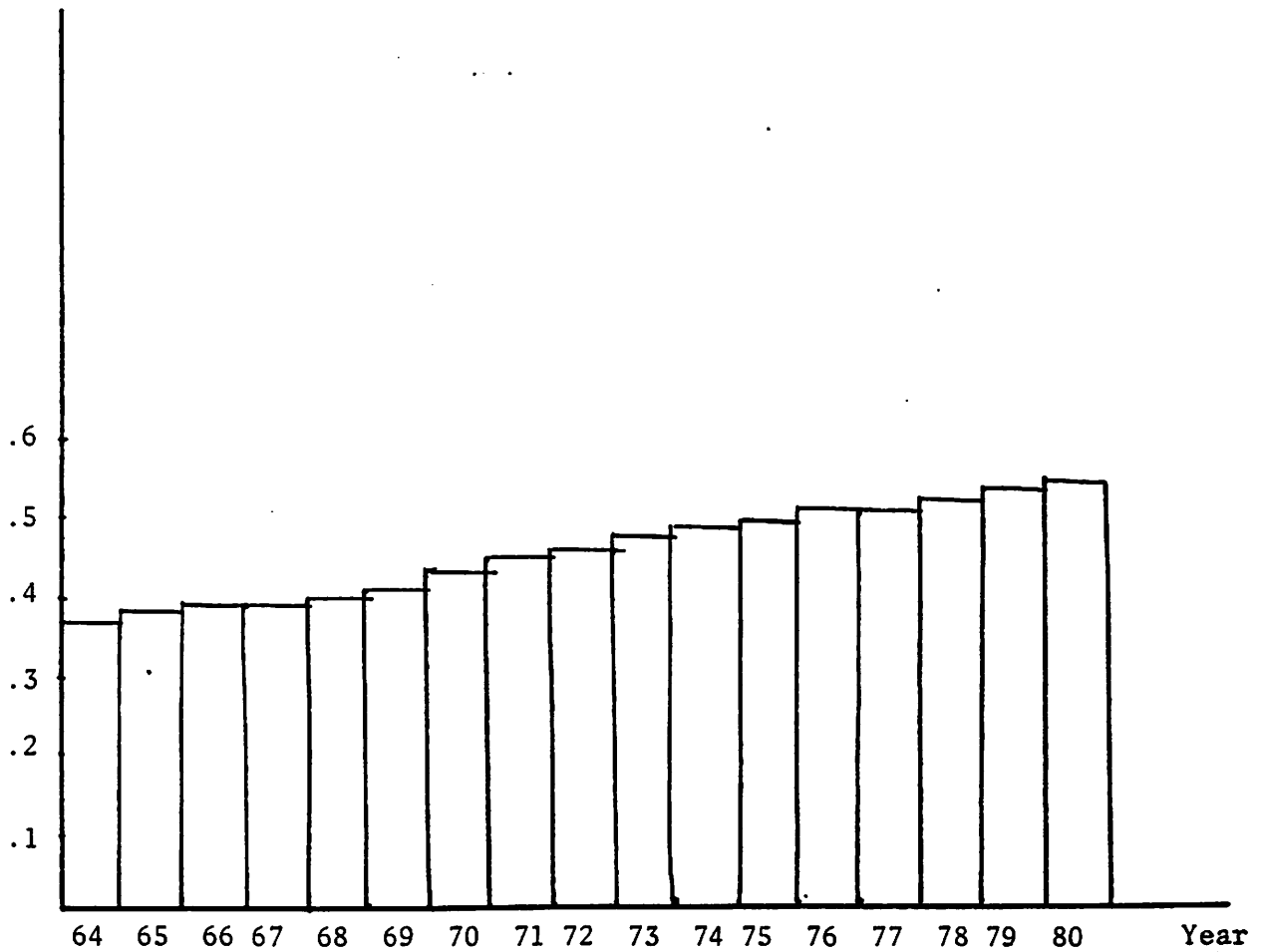
Table 1. registered motor vehicles per head of population

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		

Source: Population and Registered Vehicle Statistics as appearing in: New Zealand Ministry of Transport, Motor Accidents in New Zealand, Statistical Statement, 1982, p. 8.

Figure 1 sets out the same information in graph form.

Figure 1 Registered motor vehicles per head of population



Source: Table 1

These data indicate a steady increase through the years examined. This can probably be attributed to a wealth effect. But the interesting point for present purposes is that no significant change in this pattern occurred in or after 1974 when the scheme reducing motorists' accident costs was introduced.

The rest of my enquiry - and the major part - had to do with accident figures. In this regard I first examined in isolation the figures indicating the numbers of motor vehicle accidents involving injury or death, number of people killed (in them), and numbers of people injured (in them) for the years 1964 - 1982 inclusive. The following table sets out that data.

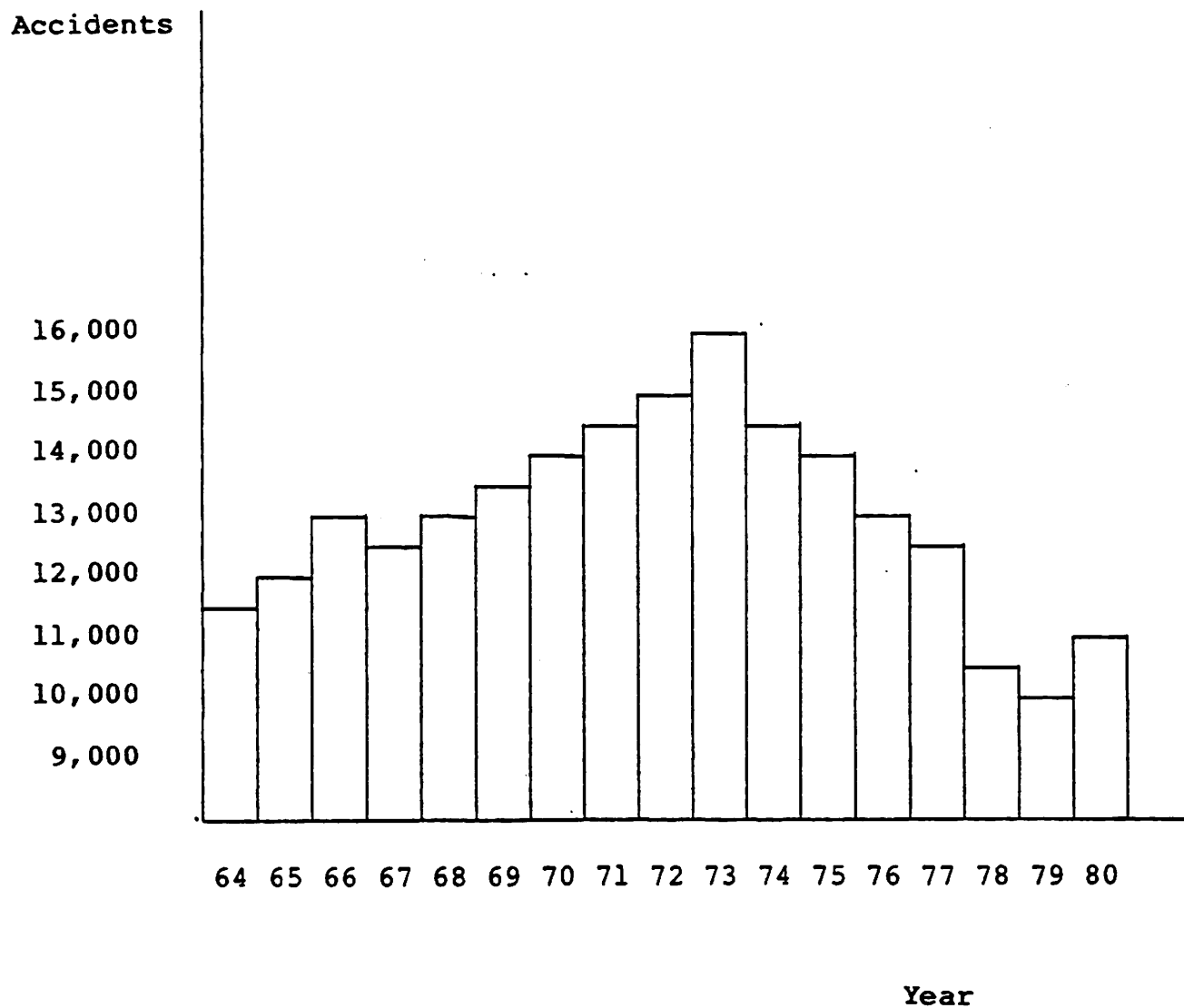
TABLE 2

Accident and casualty statistics 1964-80

Year	No. 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

Source New Zealand Ministry
of Transport, Motor Accidents
in New Zealand Statistical
Statement, 1982 p.8.

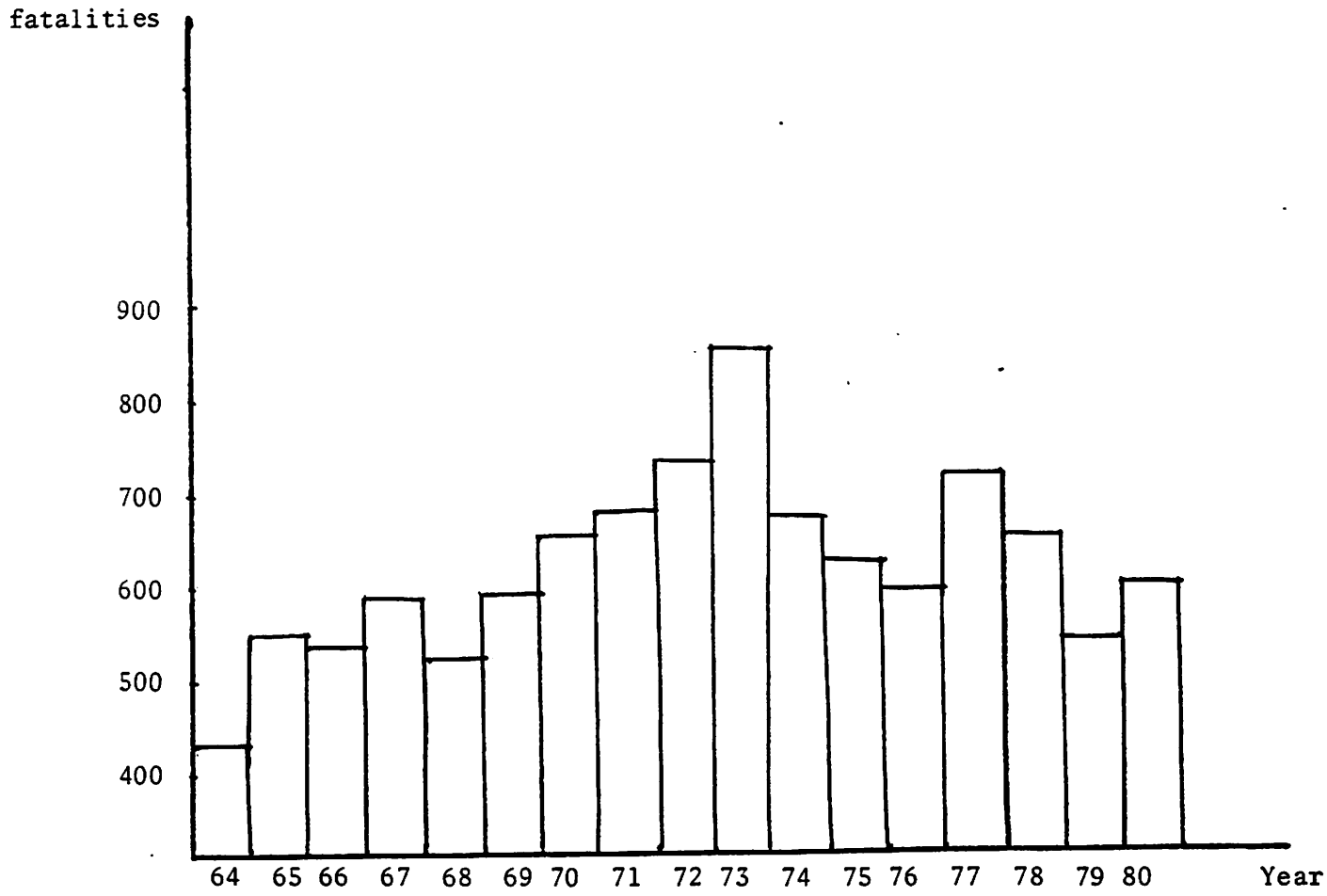
Simple graphs based on these figures (figures 2, 3 and 4) illustrate a general downward trend in all injury or death - causing accidents since 1973. The fatalities figures are broadly similar although there have been more significant fluctuations since 1976 - although only once exceeding the 1974 level and never approaching that experienced in 1973.

Figure 2. Accidents involving death or injury 1964-80

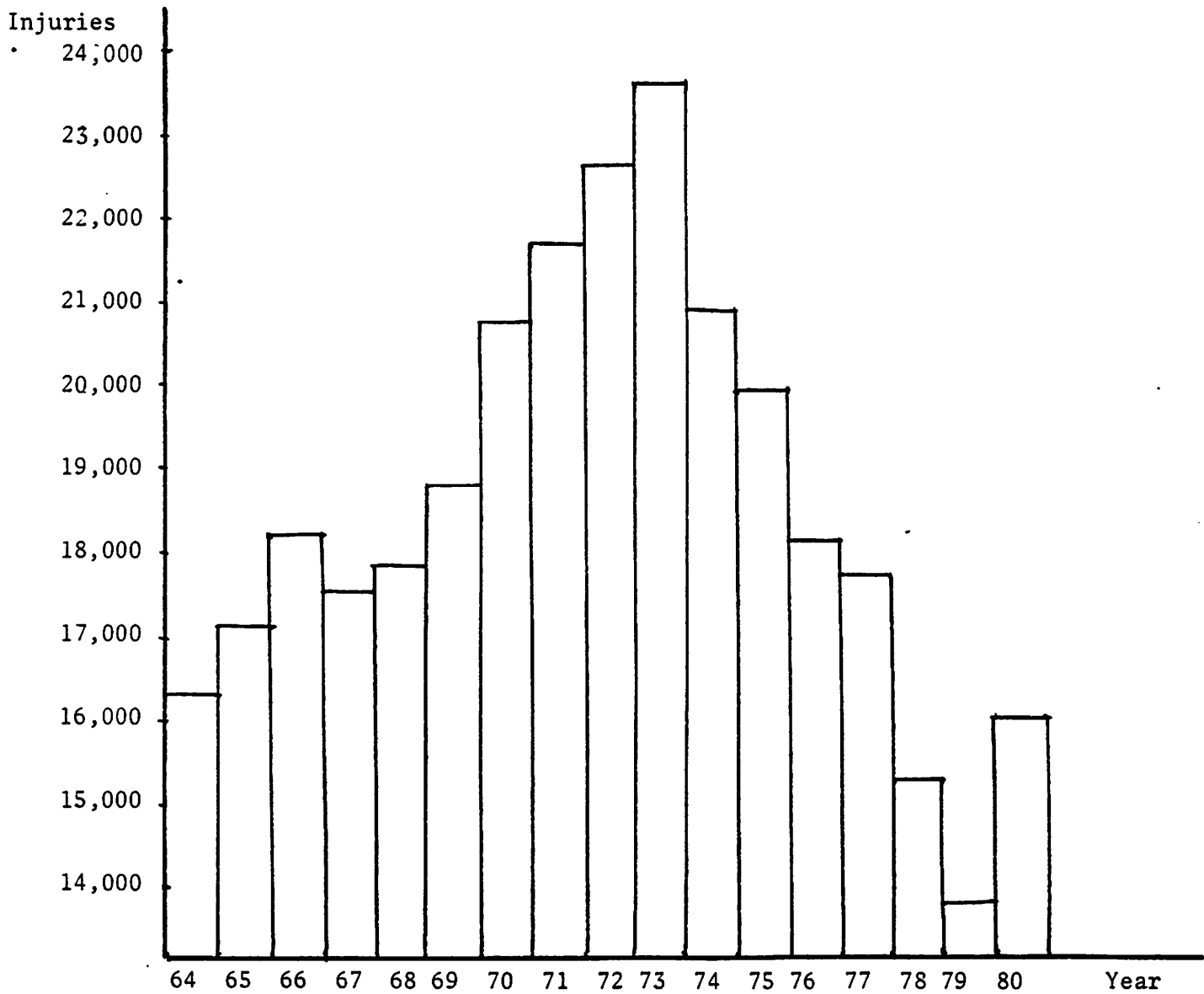
Year

Source Table 2

Figure 3 Road Accident Fatalities 1964-80



Source: Table 2

Figure 4 Road Accident Injuries 1964-80

Source: Table 2

There are several factors which may explain this general decline in the absolute numbers of accidents, injuries and deaths since the 1973 peak. The world oil crisis in 1974 hit New Zealand especially hard because all its supplies at that time were imported. The result was a dramatic increase in the price of gasoline, which in turn, led to lower consumption and, therefore, less motoring. In addition, the open road speed limit was reduced from 55 mph to 50 mph as a fuel conservation measure. This alone may have resulted in fewer accidents. Further conservation measures were adopted later. Gasoline sales were prohibited at weekends from 27 February 1979 to 29 August 1980, and automobiles could not be operated one day per week (the day to be nominated by the owner and identified by a coloured sticker) from 1 July 1979 to 13 May 1980. The reduction in total miles driven consequent upon these measures is also reflected in the accident, and particularly the fatality figures. The following table sets out the yearly estimate of total kilometres travelled by motor vehicles. These estimates, taken from Ministry of Transport publications,⁴² were until 1978 made from statistical returns made by transport operators and from total fuel consumption using average vehicle fuel consumption figures. Thereafter, they have been calculated by regression formula using fuel usage, vehicle registration and population statistics.

Table 3Total Vehicle Kilometres Travelled 1968-80

<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

Source: New Zealand Ministry of Transport Motor Vehicle Accidents in New Zealand, 1982, p. 9.

Given these variations in the amount of motoring done from year to year, especially the declines in some years, it is necessary to adjust the absolute accident figures to give a more accurate accident rate picture.

By dividing the number, of accidents, fatalities or injuries for a given year by the number of hundreds of millions of kilometres travelled in that year, a figure of accidents (etc.) per hundred million kilometres travelled is obtained. A comparison of such figures for each of the years under study gives, it seems to me, a more appropriate picture of accident trends.

The following table (Table 4) illustrates those trends for, respectively, total accidents, total casualties, and total fatalities.

Table 4

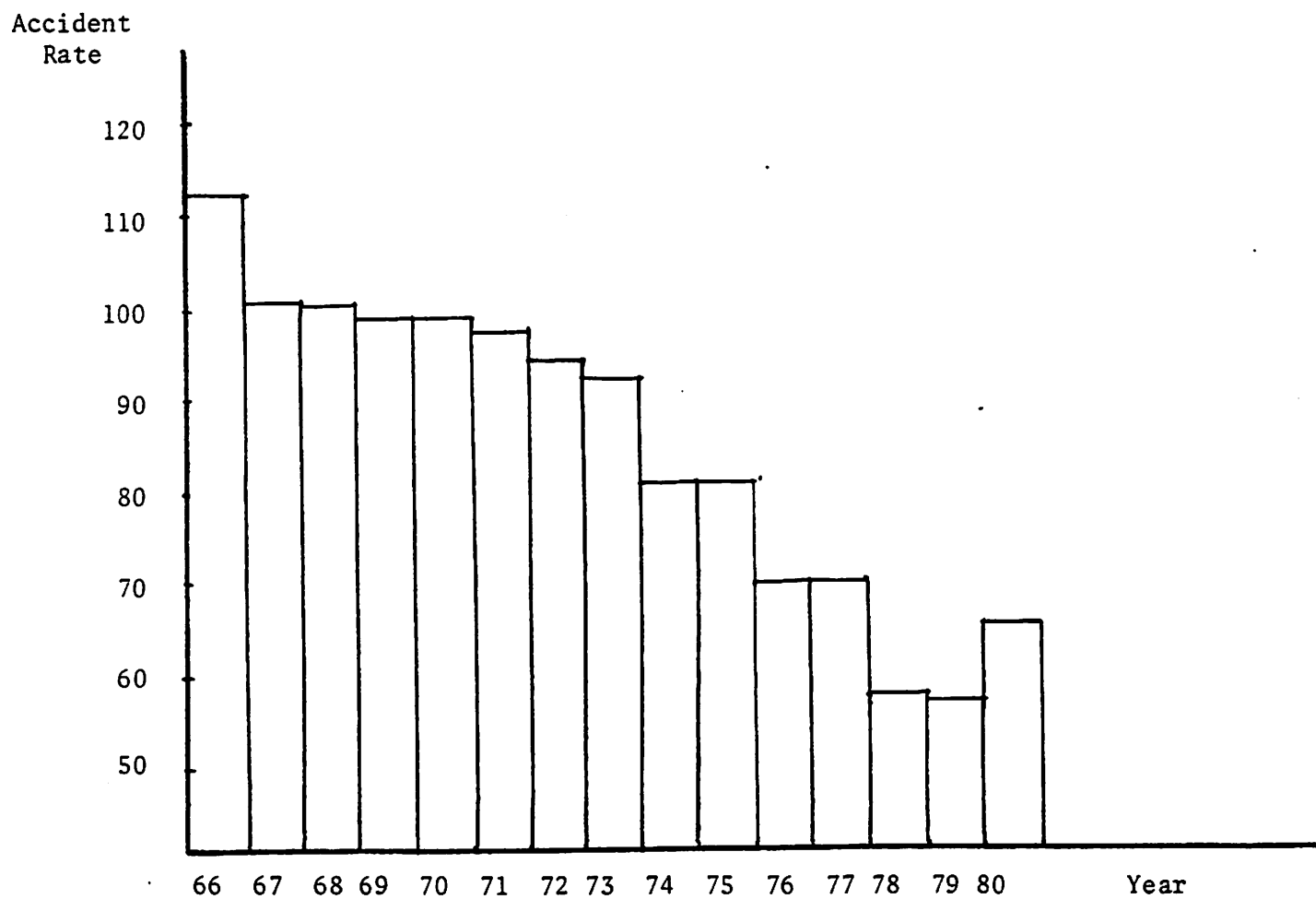
Accidents, Total Casualties, Fatalities per 100 million vehicle
kilometres 1966-80

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

Source, New Zealand Ministry of
Transport, Motor Accidents
in New Zealand, Statistical
Statement, 1982, p. 9.

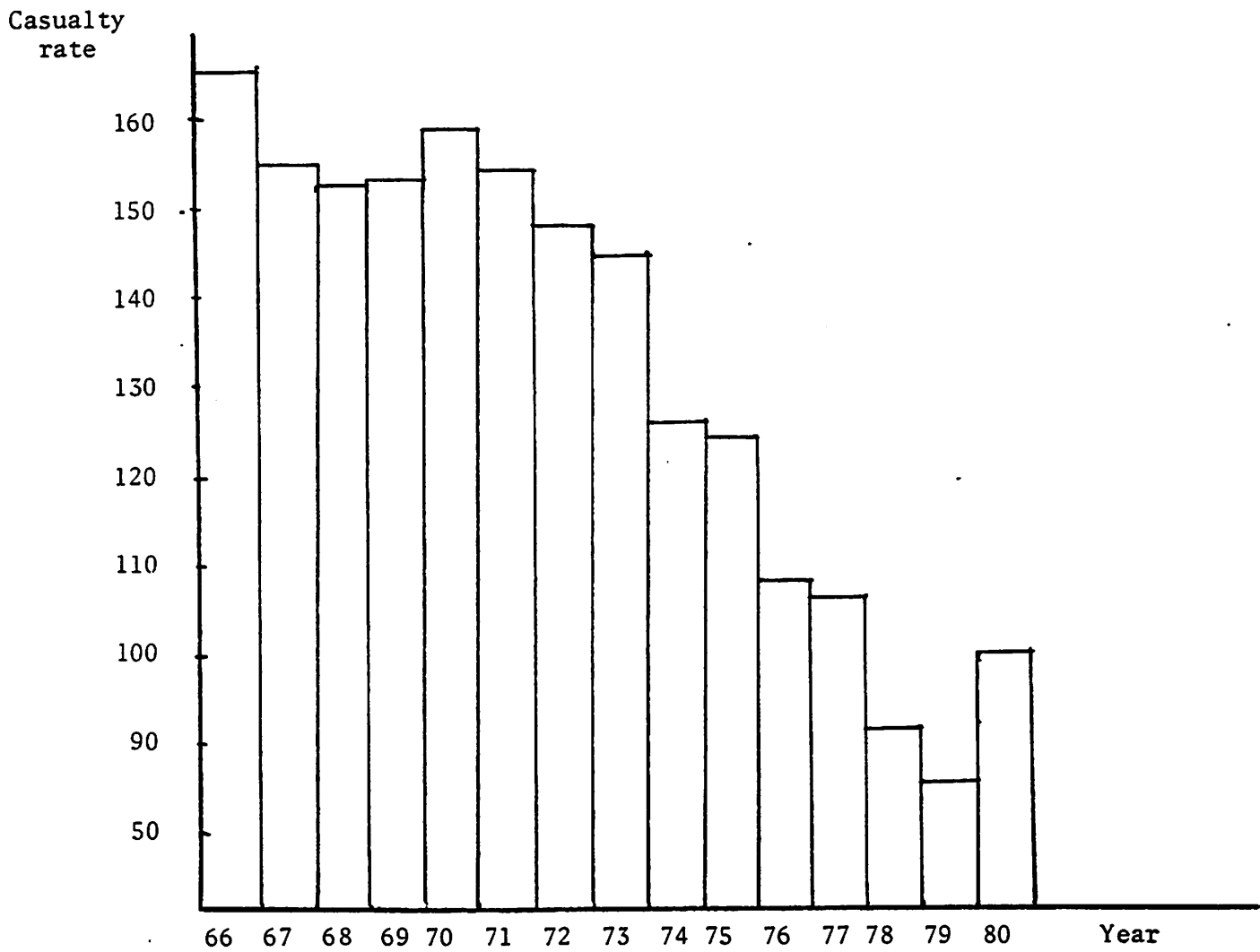
Again, when presented in graph forms (figures 5, 6 and 7), the picture is clarified.

Figure 5 Accidents per 100 million vehicle-kilometres 1966-80



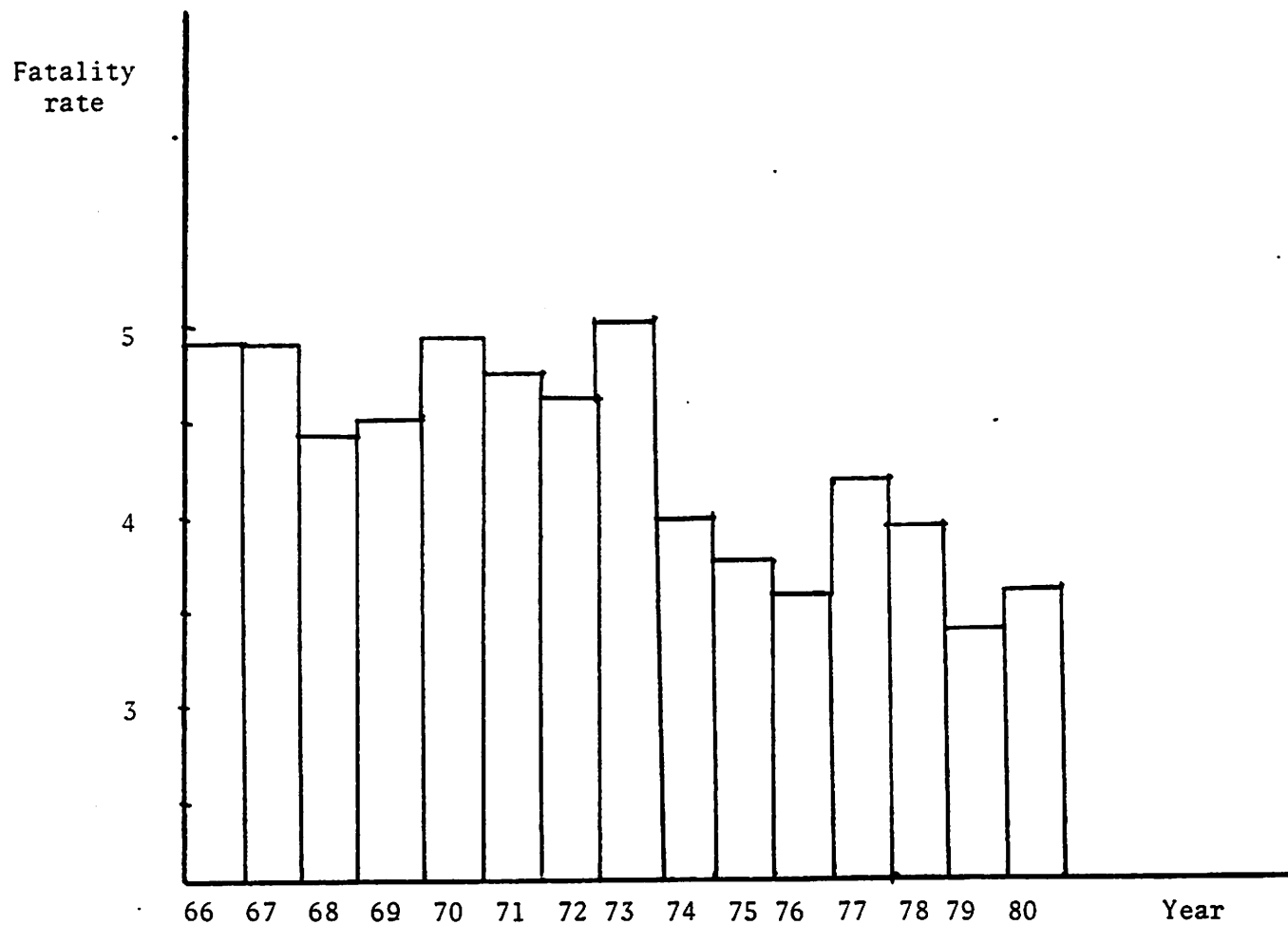
Source: Table 4

Figure 6 Total Casualties per 100 million vehicle kilometres 1966-80



Source: Table 4

Figure 7 Fatalities per 100 million vehicle kilometres 1966-80



Source: Table 4

Each of the graphs shows that from 1974 on, the accident rate and the casualty rate both continued to decline until 1980. In general, that is true too for the fatality rate, although between 1978 and 1979 the rate rose back to the 1974 level (which was lower than any previous year under study) but dropped again in 1979.

So far in this analysis there is no sign that the removal of personal injury tort rights in 1974 marked an upswing in accident, injury or fatality rates. In fact, downward trends already noticeable in 1974 have continued.

But there have been other factors operating. For example, in 1973, as mentioned, the open road speed limit was reduced to 50 mph.⁴³ In the same year safety helmets were made compulsory for motor cyclists and pillion passengers at all speeds.⁴⁴ Previously, (from 1956) they were only compulsory if travelling in excess of 30 mph. 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 1965.⁴⁵ These seat belt requirements were extended in 1975 to motor vehicles registered on or after 1 January 1975,⁴⁶ and in 1979 to cover all persons of 8 years or older.⁴⁷ In 1977, a new set of traffic regulations came into effect.⁴⁸ These included new rules dealing with the right of way at intersections and other measures designed to clarify the

obligations of drivers and others. There was also introduced a requirement that all windows of new vehicles and all replacement glazing of existing vehicle work be of safety glass.⁴⁹

In 1978 evidential breath testing, wherein the breath test could be used as evidence without support of a blood test, was introduced and the permissible blood alcohol level was reduced from 100 milligrams of alcohol per 100 millilitres of blood to 80 milligrams per 100 millilitres. In addition, the criteria for the issue of limited licences to disqualified drivers (for example, to enable them to continue driving for purpose of employment) were toughened.⁵⁰

Clearly, these various examples of what Calabresi called "specific deterrence", would have had a favourable impact on the number and severity of road accidents. Certainly the role of seat belts in preventing fatalities has been established⁵¹ and while it is difficult, perhaps impossible, to determine the precise impact that the measures (even taken together) have had,⁵² there may have been some offsetting effect in that specific deterrence has compensated for the loss of tort's deterrent effect. My own feeling is that some of these factors account for the reduction in accident rates; that if none of the various measures implemented since 1973 had been taken, the rates (in relation to km travelled) would have remained more or less constant, but of course that cannot be proved one way or

the other. What can be stated is that the removal of tort for personal injury claims, when accompanied by specific deterrent measures, has not resulted in an increase in the accident rate - indeed a reduction in that rate has resulted.

Another approach which I thought may provide some insight with respect to the central question under review here, was an examination of the results of policing activity over the relevant years. It seemed to me that when deterrence is removed, there should be an effect on behaviour generally even if such behaviour does not result in injury-causing accidents. One of the ways in which changes in behaviour which is dangerous, but which does not necessarily produce accidents, might be measured is by looking at rates of convictions for dangerous conduct before and after the event which allegedly removed the deterrent. Therefore, I examined the official statistics for convictions for those offences related to accident-causing conduct for the years 1964 to 1980 for which figures were available. This is not totally conclusive because changes in conviction rates could be attributed to increased or decreased police activity.⁵³ However, if conviction rates remained more or less constant before and after 1974, it would appear that no significant change in accident-causing behaviour has taken place.

The convictions for which I collected figures relate to the following offences:

1. reckless, dangerous or careless use or driving of a motor vehicle causing death;
2. reckless, dangerous or careless use or driving of a motor vehicle causing injury;
3. driving or in charge of a motor vehicle under the influence of drink or drugs causing death;
4. driving or in charge of a motor vehicle under the influence of drink or drugs causing injury;
5. driving or in charge of motor or other vehicle under the influence of drink or drugs;
6. exceeding speed limits;
7. reckless, dangerous, careless or inconsiderate use or driving of a motor vehicle.

The convictions were recorded in The District Courts (formerly Magistrates' Courts) in New Zealand from 1964 to 1980. Again I was more interested in the rate of convictions calculated by relating the total in each year to the total vehicle kilometres travelled. For further comparison I calculated a figure representing convictions per 1000 vehicles registered. Table 4 sets out the relevant figures.

Table 5

District Court Convictions for Moving Traffic Violations per
million kilometres travelled and 1000 vehicles registered
1966-1980

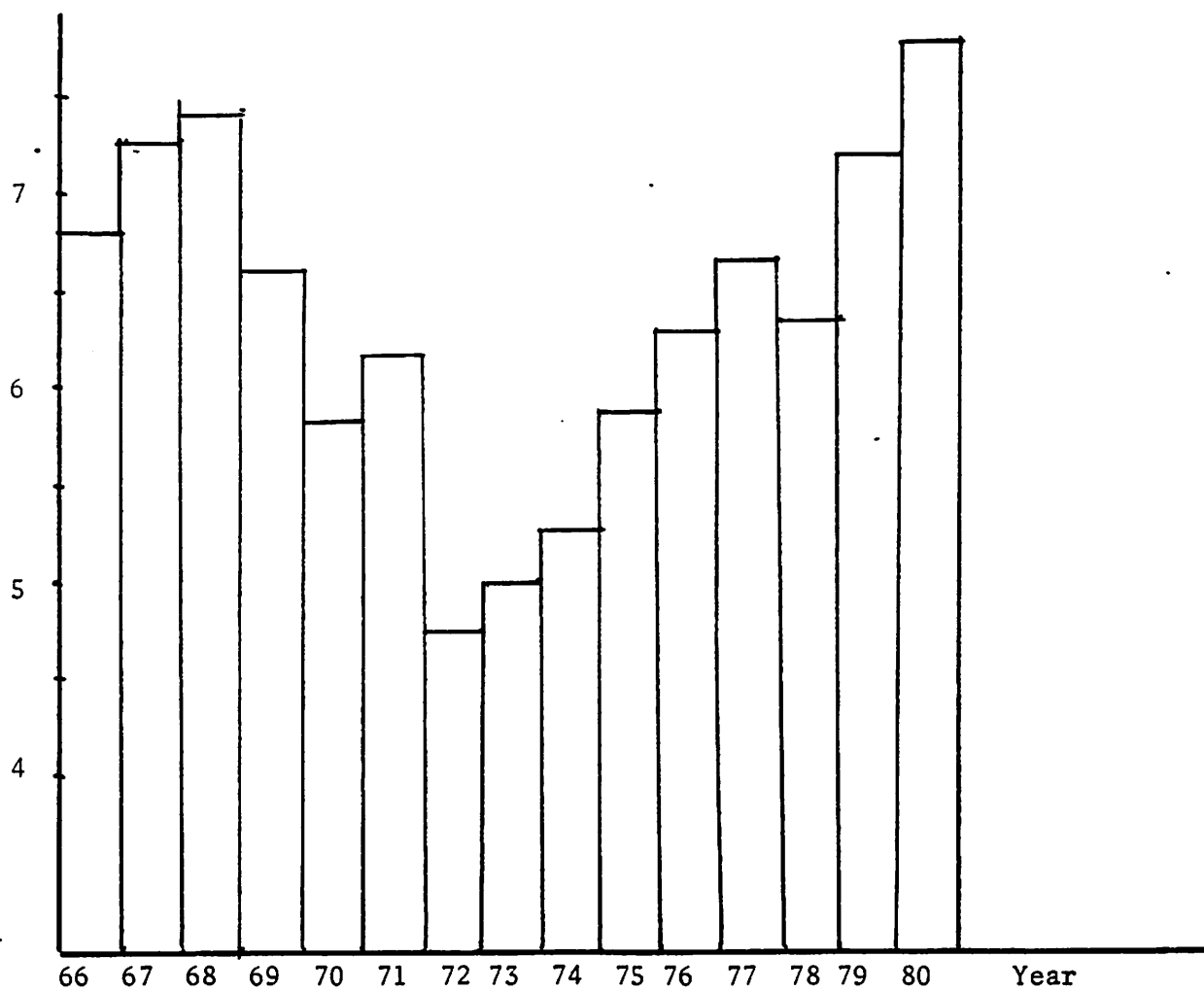
Year	rate per million km	rate per 1000 vehicles
1966	6.80	72.00
1967	7.28	77.85
1968	7.30	78.17
1969	6.60	72.40
1970	5.85	65.02
1971	6.09	68.67
1972	4.69	54.04
1973	4.96	57.75
1974	5.24	59.88
1975	5.93	63.61
1976	6.37	66.18
1977	6.68	68.40
1978	6.41	66.58
1979	7.27	69.89
1980	7.66	70.81

Source: New Zealand Official
Yearbooks 1966-83
(for conviction
figures)

New Zealand Ministry of
Transport Motor Vehicle
Accidents in New Zealand
Statistical Statement, 1982
p. 9
(for km and vehicle
ownership figures)

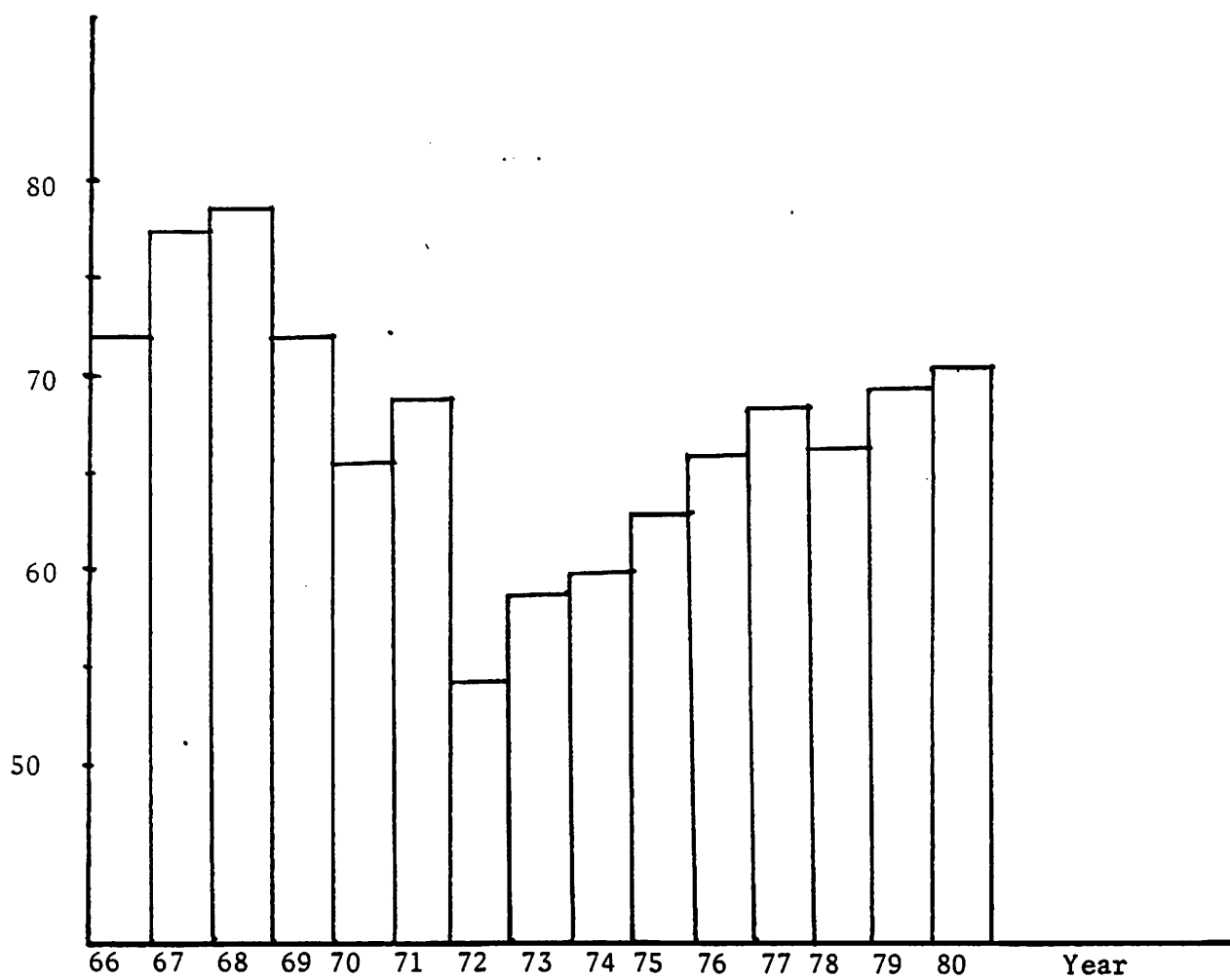
Figure 8 District Court Convictions for Moving Traffic Violations per million kilometres travelled 1966-80

Convictions
per
million km
travelled



Source: Table 5

Figure 9 District Court Convictions for Moving Traffic Violations per 1000 vehicles registered



Source: Table 5

The graphical representation of these figures (figures 8 & 9) demonstrates a steady increase in the conviction rate both in terms of kilometres travelled and vehicles registered since 1972. On my earlier hypothesis, assuming a constant level of policing activity, this may indicate an increase in illegal (and one would suppose,⁵⁴ dangerous) behaviour. But it may simply indicate a higher level of police activity which itself accounts for the lower accident rate. In fact, further analysis of the figures reveals that after 1969, the increase in the conviction rate is largely attributable to an increase in convictions for alcohol-related offences. Prior to 1969, the percentage of convictions represented by such offences was constantly in the 1 to 1.5% range. In 1969 breath and blood alcohol tests were introduced⁵⁵ and the figure rose to 2.5%. In 1970 it was 5.45%, and in 1971, 6.57%. From 1971 testing for blood alcohol of accident victims admitted to hospital was required⁵⁶ and from 1972 until until 1977, the proportion of alcohol related convictions ranged from 8.71 to 9.62%. In 1978 breath testing was made tougher in that evidential tests (as opposed to screening tests, which required further blood testing) were introduced and the maximum blood alcohol level was lowered.⁵⁷ In 1978 alcohol offences accounted for 11.18% of convictions, in 1979, 9.24% and in 1980, 10.73%.

This suggests that the increases in total convictions were attributable not to an increase in illegal and dangerous

behaviour, but to a more efficient system of detection and prosecution of a certain category of offences, i.e. alcohol-related offences.⁵⁸ Convictions for recklessness, and speeding for example have remained at a relatively constant level. This is illustrated by the following table, (table 6) which was compiled by dividing the figure representing number of millions of kilometres travelled in each year by the figures for that year for number of drunk driving offences, speeding offences and reckless driving offences, respectively. This produces, in each case a figure representing the number of millions of kilometres travelled for each conviction. The trend is indicated by a comparison of those figures over time.

Table 6

Millions of Kilometres travelled for each conviction for
(a) drunk driving offences
(b) speeding offences
(c) reckless driving offences

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

Source: Table 3 (for km figure)
and New Zealand Official
Yearbook 1966-83
(for conviction figures)

A further comparison which seems to me to be useful for the purposes of this exercise is that between the figures for New Zealand, especially since 1974, and those for other countries whose systems still utilize the tort remedy for personal injury (similar to that which formerly applied in New Zealand), as well as for property damage. I found some such data for Australia and Great Britain. As the following table (Table 7) shows, New Zealand's fatality and accident rates (measured in relation to number of vehicles registered which admittedly is less

satisfactory than kilometres driven) to compare favourably to that of Great Britain (at least since 1976) and especially to that of Australia.

Table 7

Road Accident Comparison between New Zealand, Australia and the United States

Year	Country	Fatalities per 100,000 population	Number injured per 100,000 pop.	Fatalities injured per 10,000 vehicle	Injuries per 10,000 vehicles
1967	N.Z.	20.9	637.9	5.3	161.4
	Aust.	27.0	680.0	8.0	198.0
	U.K.	13.7	676.4	5.4	267.6
1973	N.Z.	27.9	760.8	5.9	160.0
	Aust.	27.9	721.0	6.5	168.8
	U.K.	13.2	619.2	4.6	214.9
1976	N.Z.	22.3	556.0	4.27	106.7
	Aust.	25.0	651.0	5.00	134.0
	U.K.	12.0	630.2	-	-
1977	N.Z.	17.6	441.2	3.2	80.2
	Aust.	26.0	681.0	5.2	135.1
	U.K.	12.0	631.6	3.8	188.4
1979	N.Z.	17.6	441.2	3.2	80.2
	Aust.	26.0	681.0	5.2	135.1
	U.K.	12.0	631.6	3.8	188.4
1980	N.Z.	18.8	502.6	3.3	88.9
	Aust.	26.0	681.0	5.2	135.1
	U.K.	12.6	631.6	3.8	188.4

Source: New Zealand Official Yearbook 1969-1983

Conclusion with respect to Road Accidents

The abolition of tort actions for personal injury damages occurred in New Zealand in 1974. As indicated above, the scheme created considerable externalities as far as the costs of automobile accidents are concerned. The economic model described at the start of the paper would suggest that the new scheme would result in (a) an increase in motoring and (b) an increase in the number and possibly also the severity of accidents. But the interesting outcome of my enquiry is that, for the changes that occurred in New Zealand in 1974 in terms of externalities created and theoretical individual incentives removed, the predictions inherent in the model did not eventuate. Firstly, there was no significant shift in motoring activity as represented by the number of vehicles registered. Secondly, the statistics relating to automobile accidents involving injury or death show no change in accident rates at or shortly after that date. A predominantly downward trend in the number of accidents, deaths and injuries which had started prior to 1974 continued, and in fact, except for 1980, accelerated after the coming into force of the Accident Compensation Act. Moreover, the number of accidents in relation to total vehicle usage showed a general continuing of the decline which had already commenced.

The total number of convictions for offences involving potentially dangerous conduct continued an upward trend, which

had begun well before 1974. However, when the implementation of more effective measures for policing, especially in respect of alcohol-related offences, is taken into account even conviction rates have remained reasonably constant.

In relation to Australia and the United Kingdom, which have retained the full tort remedy, New Zealand compares favourably as far as accident and fatality rates are concerned.

My conclusion is that the removal of tort liability for personal injury in New Zealand has had no adverse effect on driving habits. The downward trends in accident and fatality rates coincide with the progressive implementation of specific deterrent measures, such as compulsory seat belts and safety helmets, and the toughening of drunk-driving laws and procedures, and the trends can probably be attributed largely to such measures. It is impossible to know for certain whether the reduction in accident rates would have been even greater if full tort rights had been retained to act as a "partner"⁵⁹ to the traffic laws. But it can be stated unequivocally that the removal of tort rights for personal injury cases, at least when accompanied by certain specific deterrent measures, did not result in an increase in accident-producing behaviour. In fact, the net effect was a reduced accident, injury and fatality rate.

However, this is not necessarily to say that tort law in general has had no part to play as a restraining influence on motoring behaviour. As I described previously, the New Zealand system retains tort law for the property damage consequences of automobile accidents. Moreover, despite the widespread use of liability insurance, a system of significant incentives in the form of premium reductions for claim free experience, at least theoretically, gives the deterrent aspect of the system some teeth. Because the same dangerous conduct potentially causes both personal injury and property damage, the premium bonus incentive may be a factor in keeping accident rates down. Therefore, my conclusion about the removal of tort must be confined to tort rights with respect to personal injury cases.

Postscript:

Non-Automobile Cases

I should like to have extended this study to cover other types of accidents such as product related ones and medical malpractice, specifically to test my suspicion that the deterrent effect of tort operates more or less strongly for different categories. As mentioned earlier, this was not possible for several reasons. Most importantly, official data are not kept according to the categories I would have delineated. For example, there are no satisfactory statistics on the incidence of

product-related injuries or medical malpractice as separate categories. Further, with respect to the latter, there continues to be ~~an~~ uncertainty as to the parameters of the tort immunity which the Accident Compensation Act affords doctors.⁶⁰ As a result, most doctors still carry liability insurance and are arguably still influenced by the fear of tort actions.⁶¹

The area of industrial accidents was one for which I hoped an analysis could be made, because the Workers' Compensation scheme prior to 1974 gave injured workers the choice of suing a negligent employer under common law. However, for reasons alluded to above⁶² the statistics proved unsuitable for comparing the pre-1974 and post-1974 experiences. Nevertheless, the results of two other studies have shown that there has been an increase in reported accidents, particularly less serious accidents, in some industries.⁶³ At least one writer has suggested that this indicates a loss in deterrence with the abolition of the tort claim.⁶⁴ However, as Berkowitz has pointed out,⁶⁵ the increase in reported accidents is related to the fact that benefits are now sufficiently generous to allow an injured person to take time off without losing pay. In the first week of total disability, an employer must continue to pay the worker his full wages and thereafter the scheme pays him 80%.⁶⁶ This view is supported by the fact that increases are almost totally in the category of less serious injuries. There has, for example, been

no increase in the number of fatalities occurring on the job in such high-risk occupations as mining, quarrying and manufacturing.⁶⁷ Therefore, conclusions about the deferrent value of tort cannot be drawn from the studies referred to.

FOOTNOTES

- * I wish to acknowledge the valuable assistance afforded me in the preparation of this paper by my colleagues Professors Bruce Feldthusen and John Smillie.
1. For recent examples of writing that has dealt with the subject see Fleming, Is There a Future for Tort? 58 Aust. L.J. 131 (1984); Klar, New Zealand's Accident Compensation Scheme; A Tort Lawyer's Perspective, 33 U. of Toronto L.J. 80 (1983).
 2. See Compensation and Rehabilitation in Australia, Report of the National Committee of Inquiry (Canberra, 1974).
 3. See, e.g. Report of the American Bar Association Special Committee on Automobile Insurance (1969), 127.
 4. For a detailed discussion of the deterrence goal of tort law see Williams, The Aims of the Law of Tort 4 Current Leg. Probs. 137 (1951).
 5. Notably Posner, A Theory of Negligence 1 J. Leg. Studies 29 (1972); Calabresi, G. The Cost of Accidents (1970). For a critical survey of these and other theorists, see Englard,

The System Builders: A Critical Appraisal of Modern American Tort Theory 9 J. Leg. Studies 27 (1980).

6. See Calabresi, Some Thoughts on Risk Distribution and the Law of Torts 70 Yale L.J. 499 (1961).
7. It is problematical whether the costs of injuries to a pedestrian are properly attributable to the activity of motoring or walking. See 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, as quoted in J. O'Connell, Ending Insult to Injury (1975) 144. Note that a no-fault scheme which gives pedestrians access to a motorist-funded insurance plan also eliminates this externality.
8. See Englard, note 4 above ; Fleming, The Role of Negligence in Modern Tort Law 52 Va. L. Rev. 815 at 823 (1967); Atiyah, Accident Prevention and Variable Rates for Work-Connected Accidents, 4 Indus. L.J. (U.K.) 1 (1975), and Keeton R. and O'Connell J. Basic Reportation for the Traffic Victim 253 (1965).
9. Some incentives may remain in the form of premium adjustments based on driving records, but this is of course much softer than uninsured liability. See also note 13 below.

10. Brown, Deterrance and Accident Compensation Schemes 17
U.W.O. L.R. 111 (1978-9).
11. Although, in most cases there would be a settlement, which would have a dampening effect on the continuation of public interest.
12. This might be because relatively complete records are available, or because of inspection procedures and the like.
13. The high administrative costs involved in implementing a truly personalised system of premium rating in automobile insurance militates against its use. See Johnson & Flanigan. The Outlook for Insurance Rates Based on Driving Records 1975 Ins. L.J. 35; and Brown, note 10 above.
14. In this regard Linden has written of the "partnership" between tort law and criminal law. See Canadian Negligence Law 478 (1972).
15. As to the high percentage of cases settled in the U.K. see Royal Commission on Civil Liability and Compensation for Personal Injury March 1978. Cmmd. 7054, Vol. 1, 25.
(Pearson Report).

16. See Pearson Report *ibid* at 210. See also Report of the Royal Commission of Inquiry on Compensation for Personal Inquiry in New Zealand (1967) para. 92ff (Woodhouse Report).
17. In New Zealand under the Accident Compensation Scheme safety is left to the criminal law and to an extensive scheme of educational, research and other facilities. See Brown, note 10 above 138.
18. This was recommended for work accidents in New Zealand by Monroe Berkowitz in his book, *The Economics of Work Accidents in New Zealand* (1979).
19. See Brown note 10 above, 121-2. cf. Fleming note 1, 34-5.
20. Based at least in terms of general philosophy on the Woodhouse Report (note 16 above) and implemented in 1974 through legislation now appearing as the Accident Compensation Act 1982.
21. Accident Compensation Act, s. 5.
22. Although many common-law jurisdictions have no-fault schemes in operation for work accidents.
23. See, notably, Landes, Insurance Liability and Accidents; A Theoretical and Empirical Investigation of the Effect of No

Fault Accidents 25 J. of Law and Economics 49 (1982), and Grayson, Deterrence in Automobile Liability Insurance: The Empirical Evidence (1973), 40 Ins. Counsel J. 117.

24. Litigation in this field was rare prior to 1974 but in any event most cases would have been settled and there is no information readily available as to how many such cases there were.
25. Letter dated 22 May 1984 to the author from Mr. D.A. Rennie, Chief Research Officer, Accident Compensation Corporation.
26. As with products cases the few reported cases provide no reliable indication of the incidence of that type of accident.
27. See Franklin, Personal Injury Accidents in New Zealand and the United States; Some Striking Similarities. 27 Stanford L.R. 653 (1975).
28. In theory at least, the collateral benefits rule meant that tort damages, if available, could not generally be reduced to take account of welfare payments in assessing damages. Thus the cost of motoring would still reflect these costs where tort claims could be sustained.

29. Called "Contributory Negligence "in New Zealand it was given effect by the Contributory Negligence Act, 1947.
30. Transport Act 1962, s. 79. There was however a limit of liability with respect to injuries to guests and paying passengers. See Transport Amendment Act 1963, s. 4(1).
31. For accidents involving only property damage, claims would be settled by insurers either on a knock-for-knock basis whereby subrogation rights were waived, or by obtaining recovery from the driver at fault.
32. I am indebted to the S.I.M.U. Insurance Office in Dunedin, New Zealand for this information.
33. Ibid.
34. As to the lack of correlation between violations of traffic laws and accident-causing behaviour, see Crampton, Driver Behaviour and Legal Sanctions: A Study of Deterrence 67 Mich. L. Rev. 421 at 435 (1968).
35. Although it may be the only "fine" in that drivers at fault in accidents are for various reasons, not always convicted or even prosecuted.

36. See note 21 above. However, some tort actions, such as the rare case involving punitive damages for abuse of official authority, appear to have survived. See G. Palmer, Compensation for Incapacity. 271-8 (1979).
37. See for example Palmer, Ibid, see also Harris, Accident Compensation in New Zealand; A Comprehensive Insurance System 37 Mod. L. Rev. 361 (1974); Palmer and Lemons, Towards the Disappearance of Tort Law: New Zealand's New Compensation Plan 1972. U of Ill L.F. 693; Dahl, Injury Compensation for Everyone? The New Zealand Experience, 53 J. Urban L. 925 (1976).
38. As of June 1984. Note that this compares favourably with the average weekly income of between \$200 - \$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. The amount levied against each driver's license fee is \$2.
40. Accident Compensation Act, s. 49.
41. It was only in 1984 that this was increased by 50%. See footnote 39 above.

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42. Ministry of Transport, Motor Accidents in New Zealand: Statistical Statement, Calendar^a Year 1982, Table 2.
 43. Transport (Motor Spirits Conservation) Regulations, 1973 (S.R. 1973/283).
 44. Traffic Regulations 1956, Amendment No. 26 (S.R. 1973/316).
 45. Traffic Regulations 1956, Amendment No. 22 (S.R. 1972/83).
 46. Traffic Regulations 1956, Amendment No. 28 (S.R. 1974/273).
 47. Traffic Regulations 1976, Amendment No. 2. (S.R. 1978/301). The relevant age had been 15 years.
 48. Traffic Regulations 1976 (S.R. 1976 (227)).
 49. Ibid, Reg. 73.
 50. Transport (Breath Tests) Notice 1978 (S.R. 1978/310).
 51. Green and Sharpe, Seat Belt Legislation, paper presented at 23rd annual conference of the American Association for Automobile Medicine, 1979.
 52. Such factors 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 as indicated above. Determining the relative importance of each would indeed seem to be impossible. See e.g. Road Death Toll shows Drastic Drop, London Free Press, 14 July 1983, p. A, 11.

53. For example periodic "blitzes" on speeding or drunk driving.
54. Studies in the U.S. have found a lack of correlation between speeding and accident involvement. See Crampton, note 34 above.
55. Transport (Breath Tests) Notice 1969 (S.R. 1969/70).
56. Transport Amendment Act (No. 2) 1971.
57. See note 50 above.
58. A similar conclusion might be suggested with respect to the more modest increase in speeding convictions since 1971 when a new speeding infringement system was introduced - Transport (speeding infringements). Notice 1971 (S.R. 1971/132). The increased use of radar detection at that time was no doubt a factor also.
59. See Linden, note 14 above.

60. The Act removes tort claims for "personal injury by accident". This does not appear to include a case where, for example, a doctor refuses to attend to a patient's, home when called. See Vennell, Effect of N.Z. Accident Compensation Corporation or Claims for Damages against Doctors and Nurses, 1983 Nursing Forum 11.4; Sanford, Medical Misadventure and Medical Mishap 1979 NZMJ 257; D. Cole Medical Practice and Professional Conduct in New Zealand 43 (1983).
61. I thought of comparing the figures for complaints against doctors through the Medical Disciplinary procedures for the years under study. However, there is insufficient recorded data; Letter to the writer from R.P. Cardwell, Secretary. Medical Practitioners Disciplinary Committee, 6 June 1984.
62. See note 25 above, and accompanying text.
63. See Berkowitz note 18 above.
64. See Klar, note 1 above.
65. Note 18, above, p. 177.
66. Up to \$700 per week maximum which is well in excess of New Zealand's average income.

67. The New Zealand Official Yearbook gives figures for accidental deaths at several stated locations such as "quarrying and mining sites" along with other statistics relating to deaths generally. They are collected separately from the accidental injury and death data maintained by the Accident Compensation Corporation.