The 55 mph national maximum speed limit law: a case for continuation

Karen Francine Scriber
Atlanta University

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THE 55 MPH NATIONAL MAXIMUM SPEED LIMIT LAW:
A CASE FOR CONTINUATION

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THE DEGREE OF MASTER OF PUBLIC ADMINISTRATION

BY
KAREN FRANCINE SCRIBER

DEPARTMENT OF PUBLIC ADMINISTRATION

ATLANTA, GEORGIA
MAY, 1987
\[ R = ivT = 35 \]
ABSTRACT

PUBLIC ADMINISTRATION

SCRIBER, KAREN FRANCINE
B.A., Morgan State University, 1984

THE 55 MPH NATIONAL MAXIMUM SPEED LIMIT LAW: A CASE FOR CONTINUATION

Advisor: Dr. Alex Danso

Degree Paper dated May, 1987

The primary intent of this study is to examine the issues surrounding the 55 mph National Maximum Speed Limit Law and determine whether or not the existing law warrants continuation on all highways. The issues addressed in the paper are the historical background of the law, costs, benefits and savings associated with the law, enforcement and compliance, and support for and opposition to the 55 mph National Maximum Speed Limit Law.

The findings of the study showed that the 55 mph National Maximum Speed Limit Law has proven to be effective in reducing costs through reduced fuel consumption. In addition, this law is also an effective safety measure in reducing fatalities on highways. The writer recommends that the 55 mph National Maximum Speed Limit Law should be maintained on all highways in this country. In strengthening the enforcement of the law, the writer further recommends that additional funds be provided to assist state patrol agencies.

The main sources of information were secondary which included data from statistical abstracts, Federal Highway Administration documents, printed congressional committee hearings and reports. The primary sources
utilized were derived from interviews with representatives of the Georgia Motorist Trucking Association and the Federal Highway Administration.

In the event that policymakers increase the national maximum speed limit, the writer recommends that the federal government impose an additional safety measure such as requiring all states to enforce mandatory seatbelt usage to prevent the potential increase in the number of fatalities that may result from a higher speed limit.
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I. INTRODUCTION

Initially, the United States had a primitive transportation system that evolved during colonial days. The rivers and coastal waters which served as principal arteries for travel and commerce also had most of the early settlements centered around them. Extending back from these waterways were roads in various stages of development. Very few of these, mostly those near the largest cities, were "engineered" ditched and sometimes hard-surfaced with gravel or with pounded stone.

The first engineered and planned intercity road built in the United States was the privately constructed toll turnpike from Philadelphia to Lancaster, Pennsylvania. Built between 1793 and 1794 at a cost of $465,000, it was 62 miles long and surfaced with broken stone and gravel. With the advent of the railroad era, road building in the United States practically came to a halt for several decades. In spite of this halt, the automobile was introduced to society and became a new concern for transportation planners during the 1890s.

The automobile not only provided travelers with a type of personal mobility and freedom that this country never dreamed of in the centuries past, but assisted in the development of the highway system in America as well. This new highway system grew and eventually allowed Americans the opportunity to travel across state lines.

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Today, highway transportation accounts for 99 percent of all travel. In the United States, there are approximately 3.9 million miles of roads and streets. The federal government owns and maintains 7 percent, located mainly in national parks and forests and other government-owned lands. The States own 21 percent while local units of government own 72 percent. Because of such distribution of miles in the highway system, all levels of government are involved in the policymaking relating to this country's highway system.\(^2\)

One issue of concern for highway policymakers is that of safety on these highway systems. A vast number of Americans utilize these systems each day; each year, these same Americans drive more than a trillion miles on nearly 4 million miles of streets and highways. Therefore, it is accurate to say that safety is an issue that cannot be ignored; consequently, it requires that policymakers take appropriate measures that will ensure long term safety for all highway users.

The main purpose of the study, therefore, is to examine the issues surrounding the 55 mph National Maximum Speed Limit Law and based on statistics, determine whether or not the existing law warrants continuation on all highways.

The study is divided into six parts. The Introduction is discussed in Part I. Part II covers the Problem and Setting. The Literature Review is contained in Part III. The Analytical Approach utilized by the writer is presented in Part IV. The Discussion and Analysis are done in Part V and the Conclusions and Recommendations are offered in Part VI of the study.

\(^2\)Ibid., p. 2.
II. PROBLEM AND ITS SETTING

The writer participated in the Cooperative Education Program as an intern with the Federal Highway Administration. The internship experience consisted of two phases. The first covered the period of May, 1985, through August, 1985, and the second ran from January, 1986 through May, 1986. As a result of these two phases, the writer became familiar with those transportation policies which impacted the most on the general public.

The Internship Experience

The writer was responsible for researching and gathering information on the social impact of transportation policies on society. Through such research, the writer discovered problems associated with maintaining the 55 mph Maximum National Speed Limit Law.

The writer was employed with the Office of Safety and Traffic Operations, Research and Development located in McLean, Virginia. This office is responsible for planning, developing, administering and conducting research and development programs with other Federal agencies and the State Highway agencies. Specifically, the division's functions include all aspects of traffic management and control, system design, simulation and modeling and motorists' communication.¹

The Agency

The Federal Highway Administration (FHWA) is concerned with the total operation and environment of the highway systems, including the improvement of highway-oriented aspects of highway safety. FHWA administers the Federal aid highway program and in cooperation with the States it also plans, develops and coordinates the Federal aid construction program. The Federal aid highway system consists of primary (including the state interstate system), secondary and urban roads. FHWA is also responsible for the regulation and enforcement of Federal requirements relating to operating safety and equipment of commercial motor carriers engaged in interstate or foreign commerce. It also oversees the safety in movement of dangerous cargoes such as explosives, flammables and other hazardous materials over the Nation's highways.2

The organization of FHWA consists of a headquarters office located in Washington, D.C. and Regional and Division offices in the field. Figure 1 represents an organizational chart of FHWA.

Statement of the Problem

In an attempt to make our highways safer for both the driver and passenger, policymakers over the years have introduced certain safety measures. These measures range from the creation of automobiles equipped with air bags, mandatory seatbelt usage in some states across the country, car seats for children, and stricter penalties for driving under the influence of alcohol. In addition to these measures, Congress in 1975,

2Ibid., p. 2.
enacted the 55 mph National Maximum Speed Limit Law. The two main premises of this law were that it was based on the need to conserve energy and to save lives.\textsuperscript{3}

The United States was becoming increasingly dependent on foreign oil and the 1974 oil embargo forces Congress to take appropriate measures to combat the fuel shortage problems facing this country. Convinced of the need to conserve fuel and to reduce the number of traffic fatalities, Congress imposed a nationwide 55 mph maximum speed limit in 1974. During that year, the fatality rate (deaths per 100 million miles of vehicle travel) in the U.S. declined 15 percent below that of the previous year. This translated into 9,100 fewer deaths in highway accidents across America's highways, and a savings of approximately 3.6 billion gallons of fuel each year.\textsuperscript{4}

However, in spite of the significant safety accomplishments attributed to this law, there has been much debate over its necessity. Some federal, state and local government officials as well as enforcement agencies along with private citizens have questioned the need for the continuation of the 55 mph National Maximum Speed Limit Law on all highways.

The 55 mph National Maximum Speed Limit Law was an issue back in the 70s and will continue to be an issue today. Decreasing compliance, along with slipping public support and an apparent lack of support in some state legislatures could ultimately lead to the nullification of this law.


\textsuperscript{4}Ibid.
After days of Senate debate and a veto by President Reagan, on April 2, 1987, the U.S. Senate joined the U.S. House of Representatives in overriding President Reagan's veto of an $88 billion controversial highway bill. This bill contained a measure that would allow states to decide whether or not to raise the speed limit from 55 mph to 65 mph on rural interstates located in areas with a population of less than 50,000 people. The exact implementation of this change in highway policy is to be determined and voted on by each state legislature.5

The question of whether the status quo of the 55 mph speed limit can be maintained on all highways lies at the heart of controversy in which many are calling for the repeal or modification of this law. Many believe that the 55 mph speed limit has proven to be an important way to conserve fuel and reduce our dependence on foreign energy supplies. However, these same people argue that because the oil embargo has ended, there is no longer a need to further impose this law on society.

Although this national safety policy has saved many thousand lives during the past decade, the problem arises when one has to decide on its continuation on all highways. This paper, therefore, seeks to address the issue of whether or not the 55 mph National Maximum Speed Limit Law should be maintained on all highways across this country.

III. LITERATURE REVIEW

Each year about 45,000 lives are lost in motor vehicle accidents and more than 3 million individuals are injured. Highway accidents are one of the leading causes of death among the nation's youth. More than one-half of all fatalities for those between ages 10 and 16 are driving related. The National Safety Council places the cost of accidents on the nation's highways at more than $40 billion annually.¹ This makes highway safety a top national transportation priority. Thus, many states have conducted studies and maintained data on the reduced speeds since the introduction of the 55 mph speed limit.

The earliest studies of individual states' experiences compared statistics of the early months of 1973 and 1974 to determine whether safety improvements were due to reduced travel or reduced speeds. In Arizona, fatalities declined on all highways, but 92 percent of that decline occurred on those roads on which higher speed limits were posted before the 55 mph speed limit was implemented. This implies that the speed limit was the principal factor in explaining the decline in fatalities.²


A study conducted by B.Y. Chu and W. Pudinski addressed the improvements in safety in California by estimating the impact of such factors as historic trends, reduced travel, reduced speeds and safety belt usage. This study attributed 46 percent of California's decline in fatalities to the 55 mph speed limit and concluded that the speed limit saved between 3,500 and 4,200 lives.3

Fatality Statistical Data from the State of Maryland were obtained for those highways where speed limits change to 55 mph. A multiple regression analysis of this data for 1970-1976 revealed in H.S. Dawson, Jr.'s "Analysis of Accident Trends on Maryland Highways 1970-1976," that a 20 to 24 percent decline in fatalities was attributable to lower speeds.4

Time series models were used by the State of Texas to study the fatality reductions attributed to the speed limit. The fatality rate, fatal accident rate, and the injury rate declined well below historic trends when the 55 mph speed limit was introduced and remained below projections when the fuel shortage abated.5

State experience with the 55 mph speed limit, as summarized in Table 1 shows considerable consistency despite differences in regions and methodological approaches taken in estimating the effect of the speed


Table 1
Estimated Effects of the 55 mph Speed Limit in Individual States

<table>
<thead>
<tr>
<th>State</th>
<th>Highway System</th>
<th>Time Period of Study</th>
<th>Methodology</th>
<th>Estimated Effect of 55 mph Speed Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>Interstate, U.S. highways, state highways</td>
<td>1974 compared to 1973</td>
<td>Pre post comparison</td>
<td>34 percent decline in fatal accident rate attributed to 55 mph speed limit</td>
</tr>
<tr>
<td>California</td>
<td>All highways with changed speed limit</td>
<td>First quarter of 1974 compared to preceding 5-year trend</td>
<td>Linear regression</td>
<td>46 percent of decline in fatalities due to reduced average speed and speed variance</td>
</tr>
<tr>
<td>California</td>
<td>All highways with changed speed limit</td>
<td>1974 compared to preceding 10-year trends</td>
<td>Linear regression</td>
<td>39 percent of decline in fatalities</td>
</tr>
<tr>
<td>Indiana</td>
<td>All highways with changed speed limit</td>
<td>1974 compared to preceding 3 years</td>
<td>Analysis of variance</td>
<td>Effect of speed limit on 67 percent reduction in fatality rate not estimated</td>
</tr>
<tr>
<td>Kentucky</td>
<td>All highways</td>
<td>1974 compared to 1973</td>
<td>Pre post comparison</td>
<td>Speed limit key cause of reduction in accident rate</td>
</tr>
<tr>
<td>Maryland</td>
<td>All highways with changed speed limit</td>
<td>1970–1976</td>
<td>Multiple regression</td>
<td>21 to 24 percent of fatality reductions explained by speed limit</td>
</tr>
</tbody>
</table>

Table 1 (Continued)

<table>
<thead>
<tr>
<th>State</th>
<th>Highway System</th>
<th>Time Period of Study</th>
<th>Methodology</th>
<th>Estimated Effect of 55 mph Speed Limit</th>
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</thead>
<tbody>
<tr>
<td>Michigan</td>
<td>Major state highways</td>
<td>Monthly data 1972–1974</td>
<td>Multiple regression</td>
<td>38 percent of reduced fatal accidents on major state highways and 8 percent on Interstate attributed to 55 mph speed limit</td>
</tr>
<tr>
<td>Michigan</td>
<td>All highways</td>
<td>1974 compared to 1973</td>
<td>Pre post comparison</td>
<td>Effects of speed limit in reducing fatal accidents apparent in second half of 1974</td>
</tr>
<tr>
<td>North Carolina</td>
<td>All roads and highways</td>
<td>1974 compared to 1973</td>
<td>Pre post comparison</td>
<td>Reductions in fatal accidents not explained by declines in travel—speed limit important in reducing speed variance but effect of 55 mph speed limit on accidents not estimated</td>
</tr>
<tr>
<td>Texas</td>
<td>Affected highways compared to unaffected</td>
<td>1972–1974 monthly data</td>
<td>Time series models</td>
<td>57 percent of decline in fatalities in highways with reduced speed limits attributed to 55 mph speed limit</td>
</tr>
<tr>
<td>Texas</td>
<td>All highways</td>
<td>1968–1975 monthly data</td>
<td>Time series models</td>
<td>Reductions in accident rates indicate safety improvements due to reduced speed limit</td>
</tr>
<tr>
<td>Utah</td>
<td>Affected highways compared to unaffected</td>
<td>1971–1975 monthly data</td>
<td>Analysis of variance</td>
<td>Differences in fatal accidents statistically significant on affected highways, but not significant on unaffected highways</td>
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limit on safety. All studies indicate a major improvement in safety as a result of reduced speeds.

Not only have states conducted studies on the impact of the 55 mph National Maximum Speed Limit on safety and speeds, several national studies have been done and published as well. For example, the National Crash Severity Study (NCSS) conducted by J. O'Day served as an intensive investigation of approximately 10,000 crashes from 1977 to 1979. This study revealed that the possibility of fatalities increases dramatically as the change in velocity during collision increases. In this study, the change in velocity was assumed to occur over a constant 100 milliseconds beginning with the initial impact of the crash. A driver crashing with a change in velocity of 50 mph is twice as likely to be killed as one crashing with the change in velocity of 40 mph.6

David Solomon's study entitled "Accidents on Main Rural Highways Related to Speed, Driver and Vehicle" looked at vehicle speed and accident probability. This study concluded that vehicle speeds contributed to accident probability, particularly the variability in speeds on the same segment of highway. When motorists on the same segment of highway drive at widely divergent speeds, they run the greater risk of accident involvement. A wider variability in speeds increases the frequency of motorists passing one another which in turn increases the probability of the occurrence of multivehicle accidents.7


Rural two-lane highways were also studied by Julie Cirrillo to assess vehicle speed and accident probability. In her study entitled "Interstate System Accident Research - Study II, Interim Report II," she examined approximately 6,800 crashes on rural two-lane highways and found out that traveling 25 mph below or above the speed limit increases the probability of accident involvement approximately tenfold.8

A report entitled, "55: A Decade of Experience" was conducted by the National Research Council. The council established a 19 member committee made up of individuals with expertise in various disciplines needed to evaluate the benefits and cost of the 55 mph speed limit and to assess the effectiveness of state laws in enforcing compliance. Aspects such as taxpayers' costs and benefits, energy savings, travel time, public opinion, enforcement, compliance and safety were addressed in the report. The report concluded that the impact of the 55 mph speed limit on serious injuries is somewhat more difficult to determine because of the limited amount of trend data and inconsistencies in injury definition. The council's best guess of the current effect of the 55 mph is that about 2,500 to 4,500 fewer serious, severe and critical injuries and 34,000 to 61,000 fewer minor and moderate injuries occur each year because of slower and more uniform speeds. As a result, the study concluded that because of the fewer injuries, medical costs are reduced by some $50 to $90 million annually. Additionally, about 167,000 barrels of petroleum are saved per day which reduces petroleum consumption by 2.8 percent annually.

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This report represents one of the most comprehensive studies ever conducted on the costs and benefits of the 55 mph speed limit.9

In addition to the National Research Council's report, a study was conducted by the U.S. Department of Transportation in 1983. This study focused on the economic cost to society of motor vehicle accidents. It concluded that as a result of the 55 mph law, the Old Age, Survivors and Disability Insurance (OASDI)10 program saved $40 million. Some $5 million and $175,000 were also saved in the Medicaid and Medicare programs respectively.

The study also showed that social service programs (i.e., Aid to Families with Dependent Children, Food Stamps, and Title XX) also witnessed substantial savings due to the 55 mph. Over $2 million were saved in these programs and approximately $400,000 were saved in public personnel costs relating to sick leave and compensation.11

The establishment of the 55 mph National Maximum Speed Limit Law was based on the concern to save energy. Several studies had been conducted to show a relationship between lower driving speeds and fuel consumption.

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10This program is now designated as the Retirement, Survivors, Health and Disability Insurance (RSHDI).

Henry Schecter found in a National Science Foundation study that investigated the effects of the 55 mph speed limit on energy conservation showed that the 55 mph speed limit saved approximately 200,000 barrels per day of gasoline.12

A study conducted by Mason and Zub indicated that fuel consumption increases rapidly at higher speeds. Fuel consumption is 14 to 31 percent greater for passenger cars traveling at 70 mph compared to those traveling at 55 mph.13


IV. ANALYTICAL APPROACH

The analytical approach utilized in conducting this study involved descriptive analysis. A descriptive analysis of secondary information and data from statistical abstracts, Federal Highway Administration documents, and printed congressional committee hearings and reports was done to determine whether the 55 mph National Maximum Speed Limit Law warrants continuation on all highways.

Primary sources utilized in the study were derived from interviews with Mr. George Skinner of the Georgia Motorist Trucking Association and Mr. Terry Woodworth of the Federal Highway Administration. The selection of these individuals was based on their expertise in the subject matter.
V. DISCUSSION AND ANALYSIS

Historical Background

As early as November, 1918, passenger cars were capable of traveling 30 to 35 mph on open roads and by the beginning of World War II, average speeds on rural highways had increased from 45 mph to 55 mph. Wartime restrictions slowed traffic but by 1973, motorists again were driving faster than ever and the country witnessed a fast steady increase in speeds.\(^1\) This steady increase stopped during the Arab Oil Embargo that resulted in a fuel shortage. Policymakers responding to this petroleum shortage implemented the 55 mph National Maximum Speed Limit Law as a conservation measure.

The United States, representing 6 percent of the world population, consumed 35 percent of all energy produced in 1973. Although the energy shortage caused by the 1973 Arab Oil Embargo took most Americans by surprise, many industry and government officials had been aware of this nation's growing energy problem. Oil analysts had predicted a possible shortage of heating oil for the winter of 1972-1973, and in response, refineries increased the output of distillates at the expense of gasoline. The winter turned out to be exceptionally mild and this production imbalance combined with a rapid increase in the demand for gasoline in

\(^1\)Clapp, Report on the Committee for the Study of the Benefits and Costs of the 55 mph National Speed Limit to the Secretary of the U.S. Department of Transportation and the U.S. Congress, p. 136.
the summer of 1973, produced spot shortages in some parts of the country. Consequently, this resulted in the abundance of heating oil and a scarcity of gasoline for vehicles. The demand for all petroleum products for the winter of 1973-1974 was projected to be up by 1.2 million barrels per day (BPD), whereas domestic production was projected to rise by only 200,000 BPD. Imports were expected to ensure that supplies remained above the critical level. The embargo, therefore, occurred at a particularly inopportune time. Demand was established to be 19.1 million BPD, but supply was only 17.3 BPD creating roughly a 10 percent shortfall.\(^2\)

The lines at gasoline stations were the most visible manifestation of the energy crisis of 1973-1974, but heating oil supplies, agricultural activities and industrial production were also threatened by the energy crisis. Because there is substantial amounts of noncritical travel on highways, discussions of energy conservation policy often focused on the transportation sector. Fuel used in transportation accounted for half the amount of petroleum consumption. Motorists were urged to reduce unnecessary travel, combine trips when possible, develop ridesharing arrangements and drive at lower speeds.

In January, 1974, Congress passed the Emergency Highway Energy Conservation Act,\(^3\) which set the maximum speed for all vehicles at 55 mph. States that refused to lower their speed limits to 55 mph within 90 days risked losing federal highway aid and by March, 1974, all states


complied. The legislation was designed as a temporary measure and was to expire in April or whenever the President determined that a fuel crisis no longer existed. Although the embargo was lifted on April 1, 1975, the President did not lift the speed restriction, consequently, the 55 mph National Maximum Speed Limit became law.4

**Enforcement & Compliance**

Before 1974, state and local governments shared the responsibility for setting and enforcing speed limits. With the establishment of the 55 mph National Maximum Speed Limit, the federal government became directly involved in regulating traffic speeds by setting the maximum permissible speed. The enforcement of speed limits continues to be a state and local responsibility. Local governments are responsible for enforcing the speed limit within their own jurisdictions and state agencies are responsible for state highways that traverse local government lines and for those located in nearby rural areas.

After making the 55 mph speed limit a permanent safety policy, in 1975, Congress required governors of the states to certify that their states were making sufficient efforts to enforce the law and required state reports on speed trends on highways posted at 55 mph.5 Under this legislation, the federal government had little power to influence the enforcement efforts of each individual state so in 1978, the Highway Safety Act was passed.6 With the passage of this act, states were

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threatened with the loss of highway funds if they did not maintain at least 50 percent of traffic in compliance with the maximum speed limit.

As directed by law in 1980, the Federal Highway Administration (FHWA) established adjustments that states could use to lower their estimates of the percentage of traffic exceeding the 55 mph speed limit. The adjustments granted to states by FHWA accounted for errors caused by inaccurate speedometers, sampling and inaccurate measures of vehicle speeds by monitoring devices. Additional adjustments were also allowed if inaccurate measures were sufficiently well-documented.

The State of California, responding to the adjustments suggested by FHWA, offered a method which consolidated these adjustments in one single formula. Applying this formula based on California's 1980 compliance data, a decrease in traffic exceeding 55 mph went from 61.7 to 44.5 percent.

The formula is as follows:

\[ D = 0.5 \times (A-B) + B \]

A - Represents the percentage of traffic exceeding 55 mph
B - Represents the percentage of traffic exceeding 60 mph
D - Represents the adjusted percentage

Example:  
\[ A = 61.7\% \]
\[ B = 27.4\% \]
\[ D = 0.5 \]

\[ 0.5 \times (61.7 - 27.4) + 27.4 = 44.5 \]

Source: Speedometer and Odometer Accuracy Investigation, Automobile Club of Southern California, 1980.

The adjustment data from the State of California and many other states do not accurately reflect vehicle speeds on the highways. Instead,
the data from the State of California merely reflect a measure of willful noncompliance, with generous allowance for sampling error from FHWA. It should be noted that other states' compliance results might be different when the above formula is applied.

Costs, Benefits and Savings

An estimated one-half of the public costs due to motor vehicle accidents is borne by the Old Age, Survivors and Disability Insurance (OASDI) Program administered by the Social Security Administration. Almost all employed adult Americans are covered by OASDI which is largely funded through payroll deductions. In 1983, this program's payments and costs associated with accidents totaled over $1 billion. These costs result from lump sum and survivor benefits to families of fatal accident victims and persons disabled in accidents. However, due to the 55 mph maximum speed limit, savings of $40 million were achieved during that year.7

The largest program savings other than those to the OASDI program accrued to the Medicaid program. Medicaid is administered by the states, but the federal government provides matching grants for the provision of medical assistance to low income, aged, blind and disabled individuals. This program has an annual expenditure of $14 billion. In 1983, $142 million was allocated for motor vehicle accident victims and of that amount, a reduction of about $5 million were attributed to the 55 mph speed limit.

The Medicaid program also has large annual savings that are attributable to the 55 mph speed limit. Medicare, as opposed to Medicaid, covers a share of the medical costs for almost all persons aged 65 or above. The Medicare Supplemental Security Income (SSI) program designed to protect the elderly from high medical costs, paid $82 million in 1983 for automobile accidents. This reflects a savings of $175,000 which were attributed to the 55 mph speed limit law.

Substantial savings were made in the Social Service programs as a result of the 55 mph speed limit. When lower-income individuals are injured or disabled in automobile accidents, they often turn to public programs for support while they are unable to work. These programs also support surviving family members when the household head is killed in an automobile accident. It is estimated that in 1983, over $2 million were saved in these programs due to the 55 mph.8

Savings in Public Personnel costs are in the form of taxpayer costs. When public employees are killed or injured in automobile accidents, the compensation for sick leave tops $440 million each year. However, due to the reduced number of injuries resulting from the 55 mph speed limit, in 1983, a $400,000 savings occurred.9

In addition, many other public costs are indirectly increased because of motor vehicle accidents. These costs occur predominantly at the state and local levels of government. For example, the cost of automobile insurance for state and local governments is determined by the total

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8Ibid.

9Ibid.
number of accidents on public roads. Further, accidents on public facilities often result in litigation against local and state governments. The expenses associated with providing emergency services to victims at the scene of an automobile accident and the cost of medical examiners and coroners is another indirect public cost influenced by the number of automobile accidents. The National Highway Traffic Safety Administration estimates that these costs totaled approximately $700 million in 1983. Because the 55 mph speed limit reduces the number of fatalities each year, these public costs are subsequently reduced. Table 2 summarizes the direct public program costs of motor vehicle accidents.10

The establishment of the 55 mph National Maximum Speed Limit Law was based on the concern to save energy. Several studies have been conducted to show the relationship between lower driving speeds and fuel consumption. Henry Schecter investigated the effects of the 55 mph speed limit on energy conservation in a National Science Foundation study. Fuel consumption was analyzed for three categories of motor vehicles and the study took into account the distribution of speeds on main rural roads and total miles traveled for each vehicle type. When complying with the 55 mph speed limit, the study concluded that approximately 200,000 BPD of gasoline were saved due to the enforcement of the 55 mph speed limit.11

Mason and Zub conducted another study on fuel consumption to show that vehicles could not get better fuel economy at higher speeds. They found out that fuel consumption increases rapidly at higher speeds. Fuel

10Ibid.

11Henry B. Schecter, Policy Assessment of the 55 mph, pp. 15-17.
Table 2

Direct Public Program Costs of Motor Vehicle Accidents (1983 dollars)

<table>
<thead>
<tr>
<th>Program</th>
<th>Total ($)</th>
<th>Savings Due to the 55 mph Speed Limit ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old Age, Survivors, and Disability Insurance (OASDI)</td>
<td>1,262,000,000</td>
<td>40,000,000</td>
</tr>
<tr>
<td>Medicare</td>
<td>142,000,000</td>
<td>5,000,000</td>
</tr>
<tr>
<td>Medicaid</td>
<td>640,000,000</td>
<td>7,000,000</td>
</tr>
<tr>
<td>Supplemental Security Income (SSI)</td>
<td>82,000,000</td>
<td>175,000</td>
</tr>
<tr>
<td>Aid to Families with Dependent Children (AFDC)</td>
<td>23,700,000</td>
<td>1,800,000</td>
</tr>
<tr>
<td>Food Stamps</td>
<td>3,300,000</td>
<td>60,000</td>
</tr>
<tr>
<td>Title XX</td>
<td>20,745,000</td>
<td>210,000</td>
</tr>
<tr>
<td>State Charity and Public Assistance</td>
<td>28,500,000</td>
<td>1,250,000</td>
</tr>
<tr>
<td>Public Employee Workmen's Compensation and Sick Leave</td>
<td>440,000,000</td>
<td>400,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2,642,245,000</td>
<td>55,660,000</td>
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</table>

consumption is 14 to 31 percent greater for passenger cars traveling at 70 mph compared to those traveling at 55 mph. In determining the costs, benefits and savings, policymakers also concern themselves with the type of support and opposition a policy might generate. Support and opposition of any policy determines the effectiveness and the amount of impact a policy may have on society. Therefore, it is imperative to understand public perception of the 55 mph National Maximum Speed Limit Law.

Support and Opposition

Support for and opposition to the 55 mph National Maximum Speed Limit vary with individuals and organizations. At the Ninety-Fifth Congress, House of Representatives Subcommittee on Surface Transportation hearings, William E. Johns, a representative of the American Trucking Association (ATA), reaffirmed his organization's support for the 55 mph speed limit. Mr. Johns stated that:

ATA supports the continuation of the 55 mph speed limit and its position has been unchanged since the organization's executive committee expressed unanimous support for the temporary 55 mph national maximum speed limit in 1975. There is a very strong possibility that increasing the speed limit could result in a heavy cost for the trucking industry and a loss of the safety and fuel efficiency benefits that have derived from the 55 mph speed limit. Therefore, the industry continues its support for the 55 mph speed limit because it has reduced the incidence of truck related fatalities and injuries, it conserves fuel and it results in less wear and tear on equipment.


13Hearings before the House Subcommittee on Surface Transportation on the Examination of the Enforcement and Monitoring of the 55 mph Speed Limit, 95th Cong., 2nd sess. (1982).
The Managing Director of the Georgia Motorist Trucking Association (an affiliate of ATA), Charles Skinner, stated in an interview with the writer:

The Georgia Motorist Trucking Association strongly supports the 55 mph speed limit. The concept that the 55 mph speed limit reduces travel time for truckers is trivial compared to the savings associated with the law. One of the most important issues of concern for the trucking agency is safety. The 55 mph speed limit assures safety for the drivers and the moderate speed of 55 mph speed limit does not present a physical hardship for the driver.14

Motor carriers are also concerned with the possibility of purchasing new trucks if the speed limit increases. They have purchased trucks with reduced maximum speeds and have incurred considerable expense and effort in relocating facilities and rescheduling trips so that drivers can be in complete compliance with the 55 mph speed limit and the 10-hour driving limit imposed by the Bureau of Motor Carrier Safety. With this in mind, the trucking industry does not support changes in the national policy which would necessitate, for competitive reasons, the purchase of new and faster trucks at a cost of more than $60,000 each, coupled with the uprooting of drivers and families to new locations. This change in the maximum speed limit would be costly to the trucking industry and therefore, the industry has been unflinching in its support for the 55 mph speed limit.15

The National Association of Women Highway Safety Leaders also supported the continuation of the 55 mph speed limit at the same hearing.

14Interview with Charles Skinner, Managing Director, Georgia Motorist Trucking Association, Atlanta, Georgia, March, 1987.

15Hearings before the House Subcommittee on Surface Transportation on the 55 mph Speed Limit, 95th Cong., 2nd sess. (1985).
Testimony from the association's president, Hazel McKee, summarized her organization's support:

I want to go on record on behalf of the National Association of Women Highway Safety Leaders (NAWHSL), as it is known, that we support the 55 mph speed limit. In 1974, we adopted a resolution in support of the 55 mph speed limit because of its life saving capabilities and today we continue our support. Through our member women's organization, our outreach is over 6,000,000 women. We believe our educational program and our position on the benefit of the 55 mph speed limit have helped reduce deaths and fatalities by a more informed and concerned public, especially the motorists driving their children to school and other activities. Our organization teaches its children safe driving and respect for the law. I do not think we have emphasized that enough today. We need to remember that it is the law, good or bad and that we must respect it and our children must be taught to do this. So we ask for continued support for the 55 mph speed limit. We would hate to tell 6 million women and their families that we have been preaching the wrong sermon.16

In addition to support expressed by various organizations, the Subcommittee on Surface Transportation also heard testimony from groups opposing the 55 mph National Maximum Speed Limit Law. At the Hearing on the Impact of the Motor Carrier Safety Act of 1984 and Matters Related to Truck and Bus Safety held on March 19-20, 1986, the American Motorcyclist Association's (AMA) representative, Matt Benson, gave testimony on the Association's official position:

(1) It is the position of the (AMA) that the role of establishing speed laws has traditionally been that of state government.

(2) The only legitimate role of the federal government is to assist the states in developing realistic speed limits appropriate for highways and driving population to which state law applied.

16Hearings before the House Subcommittee on Surface Transportation on the Examination of the Enforcement and Monitoring of the 55 mph Speed Limit, 95th Cong., 2nd sess. (1982).
(3) Therefore, a single maximum speed limit is not appropriate for a transportation environment as diverse as that of the United States.

(4) Individual legislatures, agencies and law enforcement organizations are best suited to decide and enforce speed limits for the citizens of their states.

Until Congress acts, the American Motorcyclist Association will continue to urge motorcyclists to contact their representatives and senators asking for change. We will continue to support any legislation giving states the power to establish highway speed limits, even on just a few highways, because our association believes that speed law is state law.17

This issue of States' rights has always been a factor in deciding whether the federal government should impose a national speed limit. Many members of Congress endorse the "States' rights" argument and feel that the issue of speed limits is a state responsibility, and not that of the federal government. At a hearing on the 55 mph speed limit before the House of Representatives Subcommittee on Surface Transportation held on February 21, 1985, Senator Barbara Vocannovich of Nevada expressed her views on the states' rights issue:

I feel that states should have the responsibility for setting speed within their own boundaries. There are many different environments that make up our states. In the congested East, states would be able to set lower speed limits in order to adhere to their particular needs. However, in the West where state highways are very uncongested and there is a great distance between cars when driving, the speed limit should be higher.18


18Hearings before the House Subcommittee on Surface Transportation on the 55 mph Speed Limit, 99th Cong., 2nd sess. (1985).
Additionally, some opponents such as Dr. Charles Lave, Professor of Economics at the University of California, Irvine, testifying at the same hearing argued that:

There is no statistically significant relationship between speed and the fatality rate. Secondly, there is a statistically significant relationship between speed variance and the fatality rate. Thirdly, once the effect of speed variance is held constant, (i.e., 55 mph) there is no statistically significant relationship between fatality rate and any other speed variable.19

Dr. B.J. Campbell of the Highway Safety Research Institute, University of North Carolina, also supported Dr. Lave's argument against the 55 mph speed limit. He showed that in his research of traffic records, speed ranked last among eight primary causes of accidents.20

Not all supporters of the 55 mph National Maximum Speed Limit Law are in full agreement on every aspect of the law. In an interview with the writer, Terry Woodworth, Traffic Safety Engineer, Region Four, Federal Highway Administration, he expressed some concerns about the 55 mph speed limit:

The 55 mph speed limit is a good idea, however, the compliance mechanism used by the federal government needs improvement. The current compliance requirement for states is that 50 percent of traffic must not exceed the 55 mph speed limit. This percentage is misleading and not representative of traffic exceeding 55 mph. Speed monitor stations are placed throughout the eight states that comprise Region Four and an average of monitored speed is taken from the various locations. In the city of Atlanta, speed monitors are placed on some highways where there is a large amount of rush hour traffic. Many times a driver can only go as fast as 15 to 30 mph. These

19Ibid.
20Ibid.
30

low speeds are then computed into the state average and these results usually lower the state's average speed limit. States with cities like Atlanta usually always are in compliance with the 55 mph speed limit.21

In a hearing before the House Subcommittee on Surface Transportation, a representative of the National Research Council and the National Academy of Sciences, Darrell V. Manning, spoke on behalf of his organization.

Our organization feels that support of the 55 mph speed limit be retained as a national policy. However, states are now equally vulnerable to penalties for trivial as well as major violations. The current monitoring approach, for example fails to distinguish between a vehicle traveling 56 mph and those going 80 mph. Similarly, it fails to distinguish between vehicles traveling on secondary roads versus interstates. Therefore, we suggest that in order for the 55 mph speed limit to be an effective safety measure, a new monitoring approach must be adopted.22

The preceding testimonies merely reflect a small percentage of proponents and opponents of the law. It was the intent of the writer to provide the reader with a general idea of the various issues that influence public support for and opposition to the law.

21Interview with Terry Woodworth, Traffic and Safety Engineer, Region Four, Federal Highway Administration, Atlanta, Georgia, March, 1987.

22Hearings before the House Subcommittee on Surface Transportation on the Examination of the Enforcement and Monitoring of the 55 mph Speed Limit, 99th Cong., 2nd sess. (1982).
Conclusion

Since the Arab Oil Embargo, the 55 mph speed limit along with improved vehicles, highways and other safety policies, had contributed to a safer driving environment. The reduced speed limit since 1974 is a key factor in the dramatic decline in highway fatalities. As a result of this decline, 2,500 to 4,500 fewer individuals died in highway accidents across American highways and approximately 3.6 billion gallons of fuel were saved. The 55 mph speed limit has also reduced the cost in public programs, i.e., Medicare, Medicaid, OASDI, Social Service Programs, and public personnel costs. These cost reductions are a consequence of fewer fatalities resulting from the 55 mph National Maximum Speed Limit Law.

In view of these facts, the writer supports those in the American polity who argue that the 55 mph speed limit be maintained on all highways. Research has shown that the National Maximum Speed Limit Law is one of the most effective highway safety policies ever developed and that no other policy has had such an impact on highway fatalities and injuries. Statistics provided in the study do not provide any justification for the modification of the law. The writer, therefore, disagrees with giving individual states the right to determine their own maximum speed limits.

Consequently, the 55 mph National Speed Limit should be maintained on all highways in spite of calls for its modification and ultimately its repeal.
Recommendations

In order to promote safety, federal law now permits the withholding of federal highway funds from states which have more than 50 percent of their motorists exceeding the speed limit on roads on which 55 mph is the posted speed limit. However, these states are allowed adjustments for speedometer error and sampling error. These adjustments make the law less stringent than it appears. Additionally, courts rarely convict motorists cited for driving above the speed limit and law enforcement agencies are traditionally lenient with violators of the speed limit. Only major infractions such as driving 10 mph above the speed limit in some jurisdictions require the issuance of a citation. Despite the degree of importance that individuals and organizations attach to speeding offenses, the current law makes no explicit allowances for these attitudes exhibited by law enforcement agencies.

To reflect both safety priorities and traditional organizational practices, the writer recommends that the federal government measure the speed limit through a point system. This point system would reflect the different risks associated with various road systems. For example, it is more dangerous to drive 10 mph above the 55 mph speed limit on a secondary road than on an interstate highway. Therefore, greater points should be applied accordingly for violations reflecting the different types of road systems. Implementing such a system would involve the relocation of speed sensors or possibly changing the procedure used for computing the average speeds.

Public awareness of the safety benefits undoubtedly influences public acceptance of the law. The writer recommends that appropriate measures
such as publicity campaigns, educational programs in schools and advertisements to heighten public awareness of the benefits associated with the 55 mph speed limit be taken. If more drivers were aware of the significant and potential safety benefits achieved through the enforcement of the law, the writer feels that a greater number of drivers would support and comply with it.

Agency budgets and staffing plans may severely restrict the ability of State Highway Patrols to realign their enforcement priorities in order to enforce the 55 mph speed limit law. The writer, therefore, recommends that additional funds and manpower be provided to assist state patrol agencies in the enforcement of the law. Funding for these recommended programs could come from savings realized from cost reductions associated with the 55 mph speed limit.

In the event that policymakers increase the national maximum speed limit on all highways, the writer recommends that the federal government impose an additional safety measure such as the mandatory installation of airbags in automobiles and mandatory seatbelt usage to prevent the potential increase in the number of fatalities that might result from a higher speed limit.


Hearings Before the House Subcommittee on Surface Transportation on the Examination of the Enforcement and Monitoring of the 55 mph Speed Limit. 95th Cong., 2nd sess. (1982).


