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**A CASE STUDY OF THE EFFECTIVENESS
OF WASHINGTON'S FINE SYSTEM
FOR OVERWEIGHT VIOLATIONS**

by

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TABLE OF CONTENTS

SUMMARY	vii
INTRODUCTION	1
METHOD OF STUDY	10
EMPIRICAL RESULTS	14
Weight	14
Fines	18
Court Location	22
Defendant's Address	27
Violation Magnitude	32
Arresting Officer	37
Response	38
Fine Collections	40
Repeat Offenders	41
Time Lapses Between Issue Date and Settlement Date	44
REFERENCES	47
ACRONYM AND ABBREVIATION DEFINITIONS	48
APPENDIX A	49

LIST OF FIGURES

Figure 1.	Factors in the Fee/Fine System Affecting the Number of Overweight Trucks Operating on Washington's Highways	2
Figure 2.	Axle Load Effects on Flexible Pavements	4
Figure 3.	Penalties Assessed for Overweight Violations (Total) and Appropriations of Total Fine Revenues to State and Local Court Accounts	8
Figure 4.	Appropriations (1991-93) to Washington State Agencies from Public Safety and Education Account Revenues	9
Figure 5.	Locations of Washington Counties Analyzed	11
Figure 6.	Case Dispositions on Overweight Violations in Washington, 1991-1992	21
Figure 7.	Average Percent of Original Fine Paid on All Cases for Each County . .	23
Figure 8.	Average Percent of Original Fine Paid on Contested Cases for Each County	26
Figure 9.	Percent of Original Fine Paid on All Cases by Address of Defendant . .	30
Figure 10.	Percent of Original Fine Paid on Contested Cases by Address of Defendant	31
Figure 11.	Case Pleas/Responses for Various Excess Weight Categories	33
Figure 12.	Percent of Original Fine Paid on All Cases for Various Excess Weights	35
Figure 13.	Percent of Original Fine Paid on Contested Cases for Various Excess Weights	36
Figure 14.	Percent of Original Fine Paid on Committed Cases	39
Figure 15.	Fine Amounts for Various Overloads, Average Fine Collected by Courts and Amount Appropriated to the State's Public Safety and Education Account	42

LIST OF TABLES

Table 1.	Numbers of Citations Issued in Washington for Commercial Vehicle Weight Violations and Resultant Civil Assessments, 1988-1992	15
Table 2.	Average, Minimum and Maximum Excess Weights for Each County . . .	16
Table 3.	Number of Commercial Vehicles Weighed in Washington, 1988-1992 . . .	17
Table 4.	Average, Minimum and Maximum Original Fines and Fines Paid in Each County	19
Table 5.	Total Citations Issued, Average Original Fine and Percent of Original Fine Paid, and Total Funds Collectible (on All Cases) and Collected in Each County	24
Table 6.	Unsettled Cases in Each County: by Number, Defendant's Places of Residence, and Percent of Cases with Defendants Residing Out-of-State and in Canada	28
Table 7.	Time Lapses Between Date Violation Occurred and Date Case was Settled in Each County	47

SUMMARY

Heavy trucks are causing accelerated pavement deterioration to Washington's roads and highways. The states fee and fine system is designed to deter the economic incentive to overload trucks and financially compensate for their damage to roads and highways. The main objective of this study was to determine the effectiveness of Washington's fee and fine system in recapturing the physical and resultant financial damage to pavements caused by overloaded vehicles, through the court and legal process. This was accomplished through interviews with weight enforcement officials and court personnel in addition to a detailed examination of over 8,000 citations from nine counties between September 1991 and August 1992.

Specific factors, including citation response percentages, fine reductions for contested cases, percentage of original fine collected by the state, and allocation of fines collected by the state, were analyzed in an attempt to determine the effectiveness of the collection process of fines for overweight violations.

Regression analyses were also run using percent of original fine paid in all cases as the dependent variable. Court location, defendant address, violation magnitude, arresting officer, and response were used as the independent variables.

The results of this analysis provide a more complete examination of Washington's fee and fine system for overloaded trucks and its adjudication process. In addition, the study helps identify weaknesses in the recapturing of financial damage to roads and highways through the court and legal process. By identifying the weaknesses, corrective measures can be taken to develop a more effective cost-allocation system.

INTRODUCTION

The highway/road system of Washington is a significant investment in the maintenance of the state's economy. However, Washington's transportation system is currently experiencing accelerated deterioration of its infrastructure. One of the causes of accelerated deterioration is heavily loaded trucks, whether operating legally (with a permit) or illegally.

In research by the Transportation Research Board (TRB), it was concluded that states should examine their current weight enforcement practices. "The effort of identification of overloaded vehicles is not justified if the judicial system does not handle offenders effectively" (TRB, 1987, p. 58). Casavant recommends that "...research into the effectiveness of the court system...might be useful" for the state of Washington (Casavant, 1991a, p.vi). The main objective of the research effort in this report was to determine the effectiveness of Washington's fee and fine system in recapturing, through the court and legal process, the physical (and resultant financial) damage to pavements caused by overloaded vehicles.

Factors influencing the number of overweight trucks on the state's roads and highways include the fee/fine system, courts (eg. judges' decisions and fine collection processes), and the capture rate or numbers of trucks being apprehended and fined (Figure 1). Factors to be identified in this study include citation response percentages, fine reductions for contested cases, percentage of original fine collected by the state, and allocation of fines collected by the state. This information may help to determine if there are weaknesses in the Washington fine system in attaining the funds needed to repair pavement damage caused by overweight trucks. Findings could ultimately aid transportation officials in arriving at a means to decrease the rate of

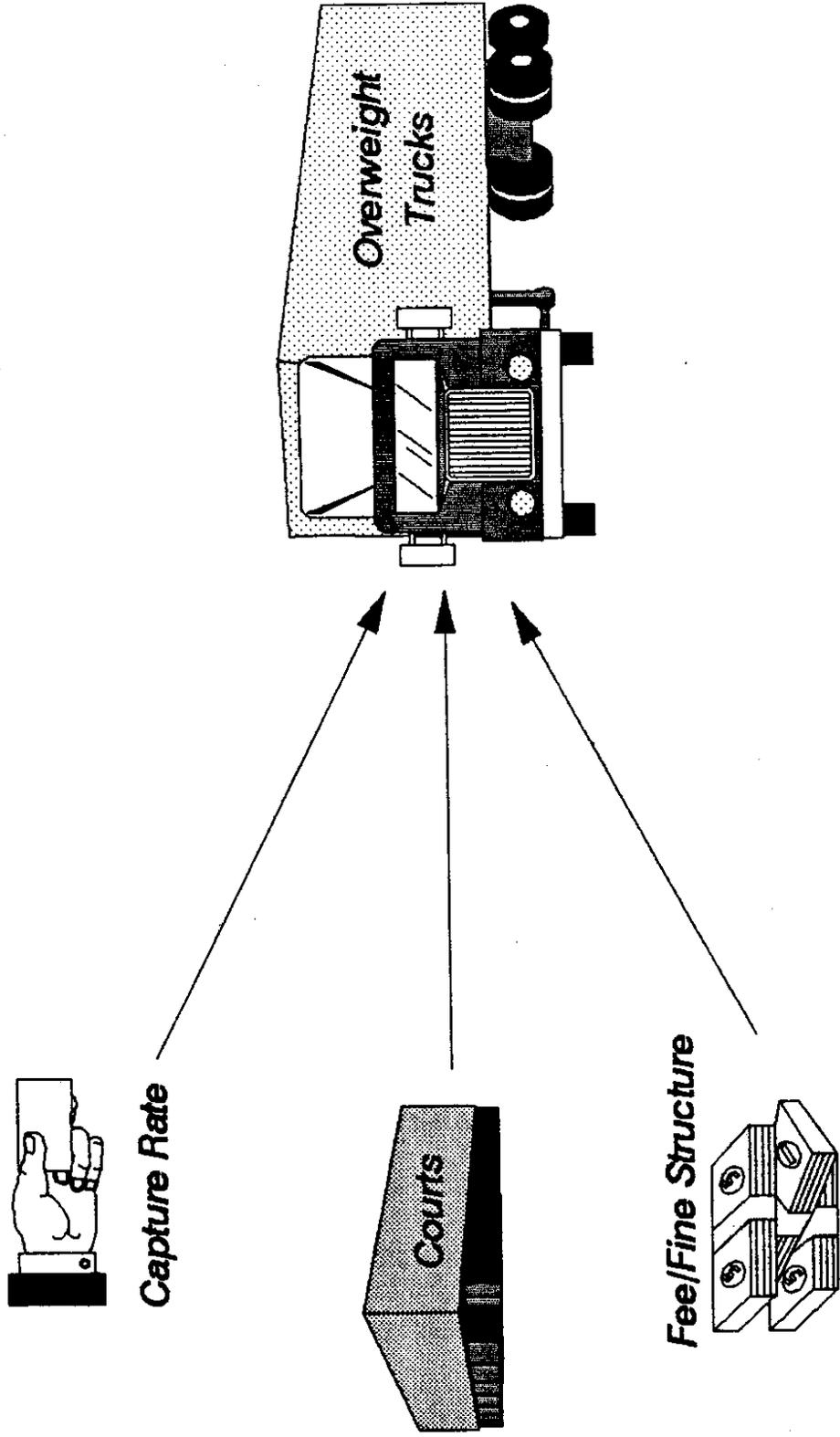


Figure 1. Factors in the Fee/Fine System Affecting the Number of Overweight Trucks Operating on Washington's Highways

pavement deterioration or procure the funds required to repair the damages caused by illegally overloaded trucks.

In the 1950s, the American Association of State and Highway Transportation Officials (AASHTO) conducted tests to determine equivalent single-axle load values (ESALs) for single, tandem, and tridem axles on various pavement types (Figure 2). Loads were evaluated using the common measures of ESALs rated at 18,000 pounds. It was concluded that "load-equivalence factors vary sharply with weight, following roughly a fourth-power relationship" (TRB, 1990, p. 72). Hence, 100 passes across flexible and rigid pavements by a 20,000 pound axle would exhibit an equal effect on pavement life as would 150 crossings of an 18,000 pound axle $((20/18)^4 = 1.5)$.

An economic incentive exists for trucks traveling in Washington to illegally overload.¹ Availability of material regarding the benefits accrued to trucking companies from overloading is limited. However, a recent study by Casavant and Lenzi concluded a truck traveling 1,800 miles with a 30 Kip overload would realize a \$1,308 cost savings over a truck hauling a legal load. The first-offense fine imposed in Washington for 30 Kip overweight is \$1,004; the net fine (the fine amount times the probability of being cited which is estimated to be 10 percent in Washington) would be approximately \$104 in this case. By obtaining a permit the trip would cost \$1,134. However, the trucker would obtain a permit for a lesser load and pay \$882 although the trucker would overload by 29,999 pounds. Hence, a savings of \$252 would be realized. The economic incentive to not pay the permit and illegally overload is considerable

¹For further information on economic incentives to overload, please refer to Part 1 of this study, "A Case Study of Motor Vehicles Violating Special Weight Permits In The State Of Washington," by Barron and Casavant.

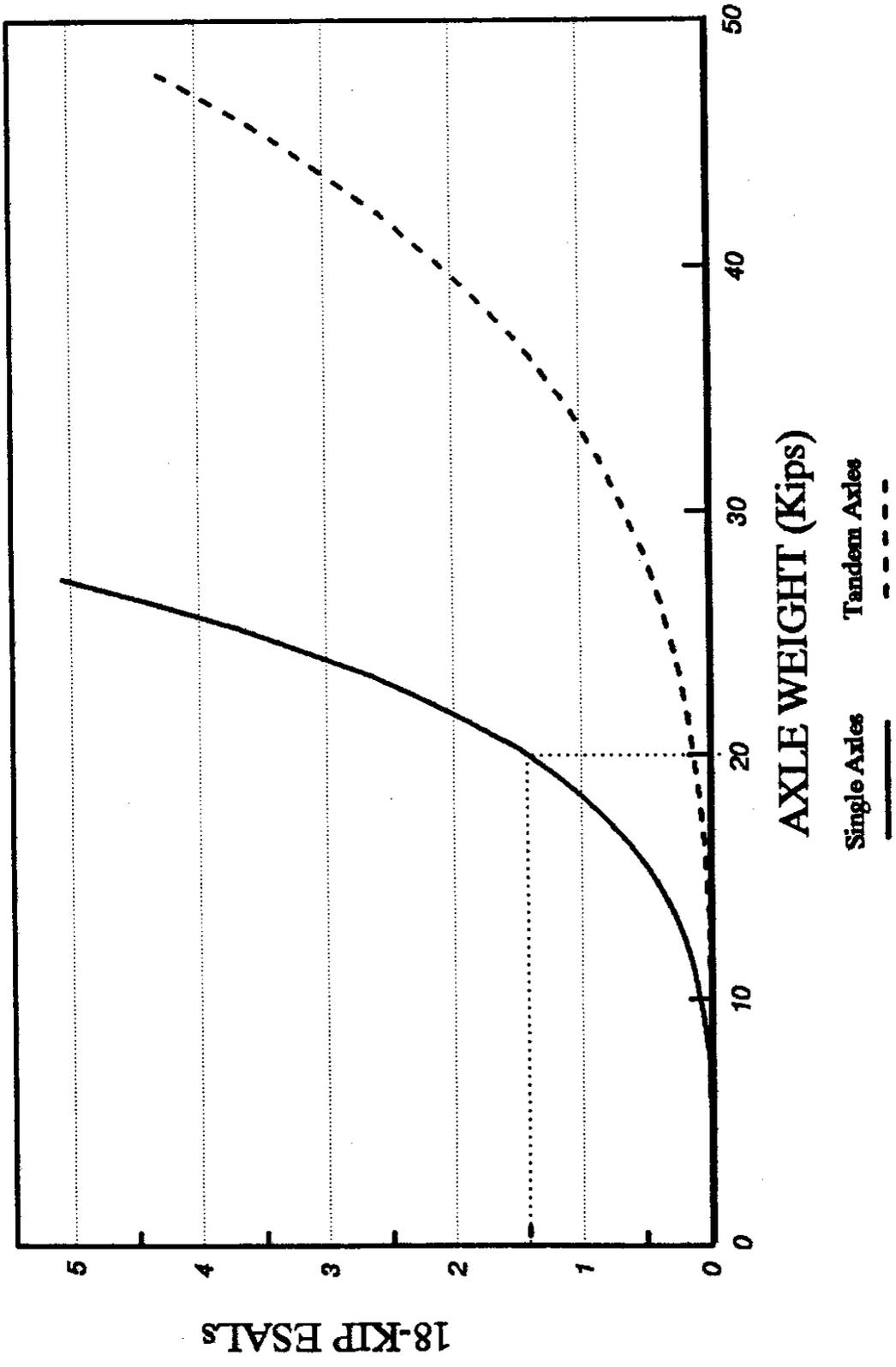


Figure 2. Axle Load Effects on Flexible Pavements (AASHTO, 1986).

especially at this weight and overload. The incentive encourages illegal overloading and results in massive pavement damage with little funding for repairs. In addition to evaluating the current court system, Washington's current fee and fine system also needs to be examined.

The purpose of this study is to determine the effectiveness of the court system in recapturing, through the court and legal process, the resultant financial damage to pavements caused by overloaded trucks. To facilitate this purpose, the increase in percent of original fine paid generated through the paid cases (payments are equal to 100 percent of the original fine) was eliminated; only those cases that were contested and found committed were examined. The percent of original fines paid in committed cases varied more than those observed when all cases were considered.

To control or recapture pavement damage caused by overloaded trucks (and to promote safety), Washington has a weight enforcement system consisting of fees (permits) and fines (penalties). This system was designed to eliminate the economic incentive to overload and to recover the road damage associated with the extra weight. The state laws associated with weight enforcement are published in the Revised Code of Washington (RCW) under Title 46 (Motor Vehicles), specifically Chapter 44 (Size, Weight, Load).

Washington's fee and fine structure is implemented via a two-step process: 1.) Enforcement of weight regulations by designated agencies (capture rate) and 2.) the legal/court process and actions (punitive rate). Those involved in the first step of the process include Washington State Patrol (WSP), sheriff's offices, and other commercial vehicle enforcement officers (CVEOs) often employed by City Public Works departments. The District Courts (county courts) are responsible for the second step, the adjudication process, which is the focus

of this study. An overweight violation is categorized as a traffic infraction and the fine associated with it can either be paid or contested in a District Court.

Penalties for overweight violations and enforcement procedures are detailed in RCW 46.44.160. The basic minimum penalty assessed for a first-time violation is \$55.00 while second and third or subsequent violations carry penalties of not less than \$85.00 and \$100.00, respectively. In addition to the basic penalties, there is a fine of \$0.03 per pound of excess weight. Upon a first violation in the calendar year, a judge may suspend the additional fine for 500 pounds of excess weight for each axle on a vehicle (not to exceed 2,000 pounds total suspension); however, under no condition is the basic penalty to be suspended.

In Washington, there are two assessments added to the base penalty of most traffic infractions including weight violations. On overweight citations, the sum of the basic penalty and the assessments is the fine to which the additional \$0.03 per pound penalty is added. The first assessment was introduced in the Court Improvement Act of 1984; revenues went to the newly created Public Safety and Education Account (PSEA) which funds programs relating to traffic safety, criminal justice training, crime victims compensation, and state game or wildlife. In 1986, revenues were inadequate to sustain levels of funding for specified programs in the PSEA so the Legislature passed the second assessment. The first assessment is 60 percent of the basic penalty and the second one is 50 percent of the first assessment or 30 percent of the basic penalty.

For a first violation the basic penalty is \$55.00. Added to this is 60 percent of \$55.00 or \$33.00. Then 30 percent of \$55.00 or \$16.50 is added. Hence, for a first-time violation, the total penalty to which the per pound fine is added is \$104.00 (the \$0.50 is rounded down).

For second and third or subsequent violations, the modified base penalties, utilizing the same method as first violation penalties, are \$161.00 and \$190.00, respectively. Temporary suspension of vehicle license registration may also accompany these fines.

Funds from fines collected through paid and contested cases are divided between the state and the local district court (Figure 3). The basic penalty and the first assessment are split between the local court and the state on a 68/32 percent basis (RCW 3.62). The second surcharge is remitted entirely to the state and the \$0.03 per pound penalty is split on a 57/43 (local/state) basis. Essentially, the overall revenue split for moving violations is 57/43 percent (local/state). District Courts deposit these funds into several different accounts such as the current expense account and crime victims account. All funds allocated to the state are deposited into the PSEA and appropriated by the Legislature for programs ranging from traffic safety and wildlife to judicial education and crime victims compensation (Figure 4). The PSEA does not currently provide funding for road repair and construction.

Recent studies show that there are currently imperfections in other states' adjudication processes for overweight violations. In Iowa, judicial support was reported to be generally good, with less than 0.5 percent of all charges dismissed. However, there was a problem with offenders failing to appear on charges filed (Iowa Department of Transportation). Oregon Department of Transportation (ODOT) felt that some judges assess realistic penalties while others do not perceive weight violations as a serious crime and thus suspend all but a token amount of the scheduled fine. ODOT reported that courts assess an overall average of 70-75 percent of the maximum fines provided by statute. However, the excess weights of 10,000

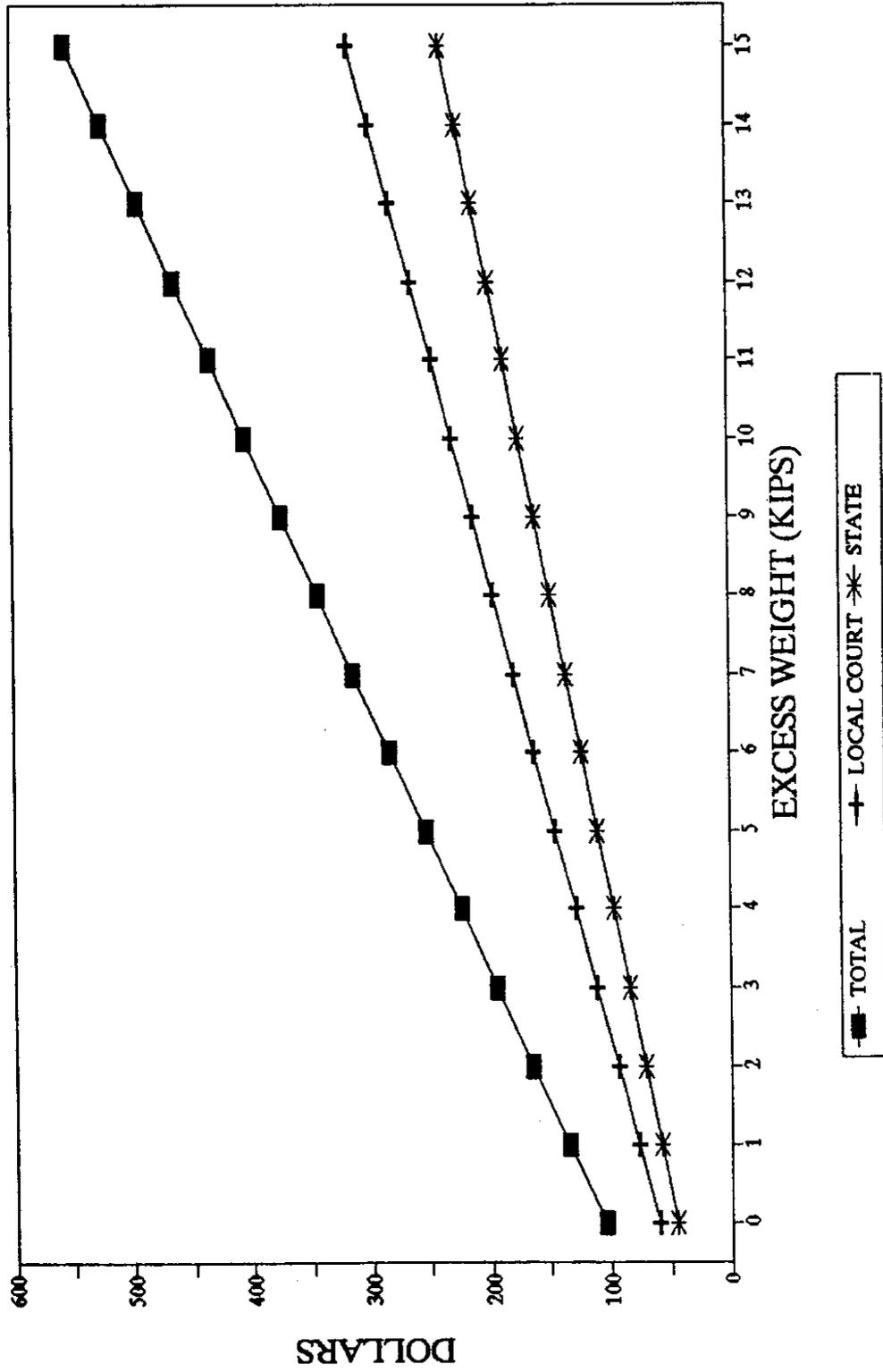


Figure 3. Penalties Assessed for Overweight Violations (Total) and Appropriations of Total Fine Revenues to State and Local Court Accounts

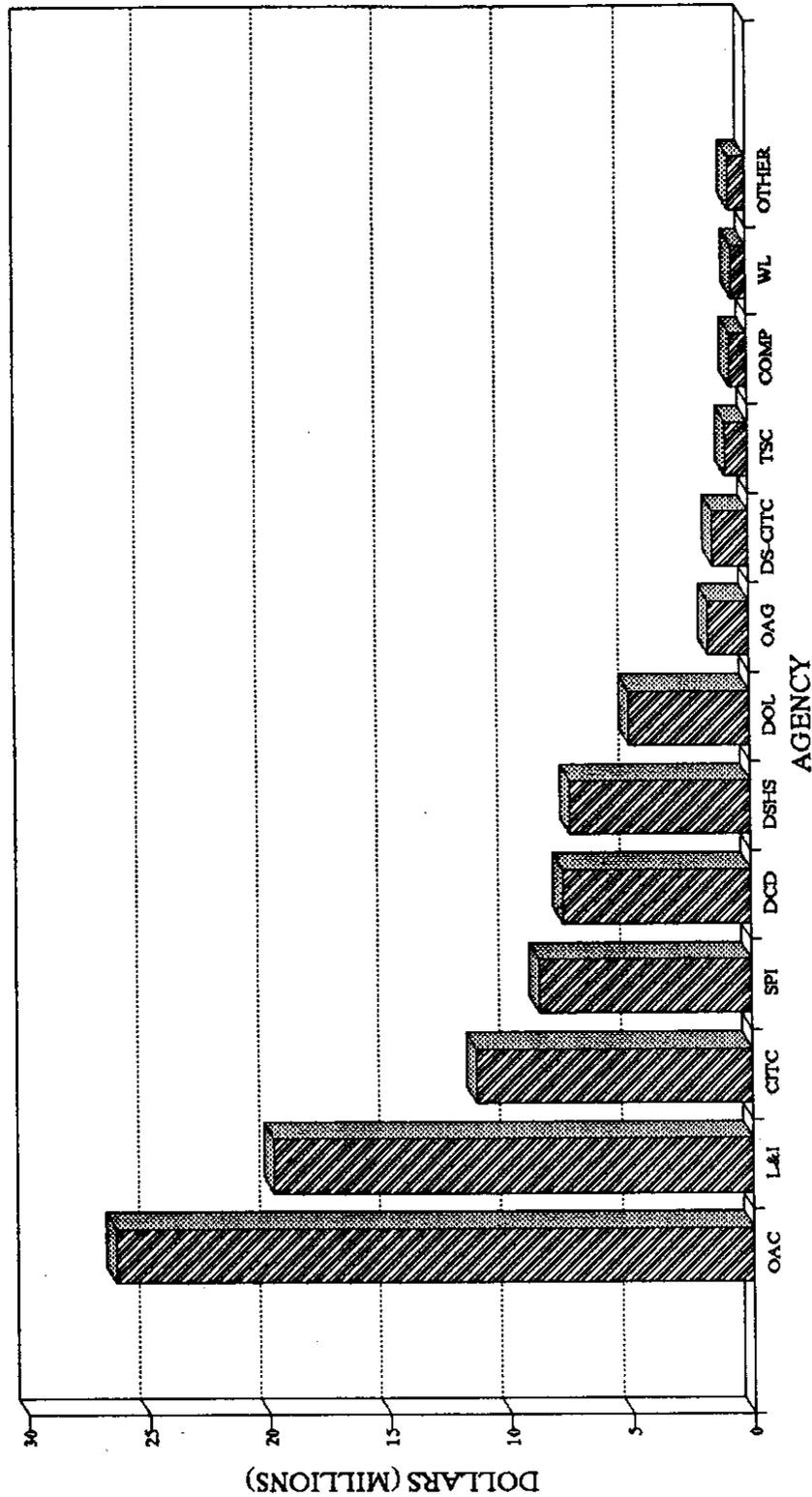


Figure 4. Appropriations (1991-93) to Washington State Agencies from Public Safety and Education Account Revenues

OAC=Office of the Administrator for the Courts; L&I=Labor and Industries; CJTC=Criminal Justice Training Commission; SPI= Superintendent of Public Instruction; DCD= Victims Advocacy and Legal Aid; DSHS= Department of Social and Health Services; DOL= Department of Licensing; OAG=Office of the Attorney General; DS-CJTC=Debt Service (CJTC Building); TSC= Traffic Safety Commission; COMP= Compensation Allocations; WL= Wildlife

pounds or more were only assessed an average of 33 percent of the maximum possible fine (ODOT).

METHOD OF STUDY

A literature review on truck weight laws and regulations and the legal/court process and actions applying to overweight violations in Washington was first performed. Information on penalties and court procedures was also obtained from District Courts, the Office of the Administrator for the Courts and Washington Department of Transportation (WSDOT). Two WSDOT reports, specifically WA-RD242.1 and WA-RD242.2 (Casavant, 1991a and 1991b), provided additional information. These reports discussed the equity of the truck fee and fine system in Washington and 1991 fee and fine regulations (by state) for overweight vehicles.

Nine counties were chosen to be evaluated in this analysis:

1. Benton County
2. Clark County
3. Grays Harbor County
4. King County
5. Kittitas County
6. Pierce County
7. Skagit County
8. Spokane County
9. Walla Walla County

They were picked mainly because of their location. These include five counties with Ports of Entry (POEs) (permanent scale sites at state borders that normally operate 24 hours daily), one county in the far west, two in western Washington along I-5 and one in the middle of the state along I-90 (Figure 5). Additional characteristics such as major income base (logging, agricultural and heavy industrial) and population were also incorporated into county selection.

The data for this study was obtained from overweight citations issued in Washington between September 1, 1991 and August 31, 1992. It was determined through phone calls to District Courts across the state that the only feasible means of tracing citations was through the use of citation numbers or names to whom the tickets were issued. Filing systems in District Courts were classified using defendants' names or ticket numbers. These numbers or names could be used to retrieve either the hard copies or computer data entries of the citations filed in the District Courts.

Citation numbers were obtained through the WSP Commercial Vehicle Enforcement Section (CVES) in Olympia. Through the cooperation of Captain Richard F. Randolph, citation numbers issued in specific counties throughout the sample period were obtained. CVEOs answered the request with approximately 8,000 citation numbers. Two sheriff's departments also provided citation numbers.

The most efficient way to retrieve data from the citation numbers was from the Courts' DISCUS system (a system consisting of complete information on citations and their dispositions) accessed through a computer in Spokane District Court. Two trips were made to Spokane where the necessary information for seven of the nine regions was obtained. Two courts in the study were not included on DISCUS so trips were made to those locations to obtain the necessary data.

In deciding sample size, a confidence level of 99 percent and an error (maximum difference between the sample mean and population mean that was acceptable for the 99 percent confidence level indicated) of \$25.00 (on the difference between original fine and fine paid) were chosen. That means, for instance, that, with 99 percent confidence, the average difference between the average original fine and the average fine paid in a sample area will fall within

\$25.00 of the true average difference for that area. The formula was applied using a population standard deviation derived from the first 50 citations in each area; statistical sample sizes ranged from 10 to 63 and it was decided that 75 citations from each location would be analyzed. Citations for the sample population were selected through a random sampling procedure utilizing a table of 10,000 random digits. The sample sizes were statistically significant, irrespective of the number of citations issued in each county. Further discussion on population sizes and the actual formula used (Weiers) are presented in Appendix A.

There were 8,193 citation numbers sent from WSP and 131 from two sheriff's offices. These numbers were from citations issued in the nine sample areas and accounted for 80 percent of the total weight violations recorded by WSP in Washington during the sample period.² Therefore, the sample areas in this study are certainly representative of the whole state not only because of their locations and sources of major income but also because of the number of citations issued in these areas relative to the total for the state.

Is Washington's current weight enforcement system, specifically the adjudication process, efficient? How many citations are paid and how many are contested? In contested cases, to what degree is the original fine reduced? Do these numbers vary by court, violation magnitude or other factors? What percentages of the original fines are collected and how much of these funds are actually utilized for road repair and reconstruction? In this study, attempts were made to answer these and other questions regarding citations issued to overweight trucks in Washington and the subsequent collection process of the associated fines.

²Total citations issued for weight violations in Washington in 1991 and 1992 were a weighted average total of 10,388.

EMPIRICAL RESULTS

Weight

The numbers of trucks cited for weight violations in Washington over the past five years suggest there is an economic incentive to overload (Table 1). The violation magnitudes on citations in this study also imply that there may be flaws in Washington's commercial vehicle weight enforcement/fine system. Numerous trucks were cited for very heavy overweights. In Skagit County a citation was written for a truck that was overloaded by 110,800 pounds (Table 2). Maximum overloads in each county, which ranged from 13,500 to 110,800 pounds, are evidence that there are very heavy trucks traveling on Washington's roads and highways. Such trucks are responsible for the acceleration in deterioration of the state's transportation infrastructure. Although these overweight trucks were apprehended incentives still exist for trucks to operate with illegal overloads.

CVEOs across the state enforce weight limits through the use of permanent, portable and semi-portable scales. The number of commercial vehicles weighed annually in Washington from 1988 through 1992 are depicted in Table 3. The number of annual weighings reported was highly variable during that time, but increased significantly (by approximately 500,000) between 1988 and 1992. This is probably due to the increased number of CVEOs, increased numbers of scales or overall increased enforcement efforts by WSP and local governments. Data from citations indicate that CVEOs display little tolerance regarding breaches on weight limits. Minimum overloads ranged from 200 to 1400 pounds suggesting that even those trucks that are causing relatively little additional damage to the roads are being apprehended and cited.

Table 1. Numbers of Citations Issued in Washington for Commercial Vehicle Weight Violations and Resultant Civil Assessments, 1988-1992

YEAR	AXLE	GROSS	BRIDGE	TOTAL	ASSESSMENTS
1988	8,727	2,920	1,699	13,346	\$2,523,806
1989	8,035	2,409	1,729	12,173	\$2,436,380
1990	7,249	3,696	1,446	12,391	\$2,492,478
1991	7,090	1,035	1,588	9,713	\$2,468,178
1992	7,456	446	1,823	10,725	\$3,154,126

Source: Washington State Patrol. "State of Washington: Certification of Size and Weight Enforcement," 23 CFR 657.13, Annual Reports 1989-1993.

Table 2. Average, Minimum and Maximum Excess Weights For Each County

COURT	AVERAGE EXCESS WEIGHT	MINIMUM EXCESS WEIGHT	MAXIMUM EXCESS WEIGHT
BENTON	3,355	1,100	15,400
CLARK	3,203	700	33,600
GRAYS HARBOR	2,755	200	13,500
KING	3,871	1,000	20,700
KITTITAS	2,700	1,400	13,500
PIERCE	3,084	300	15,200
SKAGIT	5,309	1,300	110,800
SPOKANE	4,823	1,200	19,200
WALLA WALLA	4,403	1,200	23,400
OVERALL	3,693	200	110,800

Table 3. Number of Commercial Vehicles Weighed in Washington, 1988-1992

YEAR	FIXED SCALES	PORTABLE SCALES	SEMI-PORTABLE SCALES	TOTAL
1988	1,615,146	22,300	Not Reported	1,637,446
1989	1,529,161	19,717	698	1,549,576
1990	2,086,991	11,817	3,662	2,102,470
1991	1,922,072	16,186	6,933	1,945,191
1992	2,153,558	32,055	3,312	2,188,925

Source: Washington State Patrol. "State of Washington: Certification of Size and Weight Enforcement," 23 CFR 657.13, Annual reports 1989-1993.

Fines

The current basic and additional \$0.03 per pound penalties, not including the two state assessments, imposed on overweight violations in Washington have remained relatively unchanged since 1979. A study by Casavant (1991a) evaluated the equity of the current truck weight fee and fine system in Washington. The author suggested that research into the effectiveness of the court system may be useful in determining the effectiveness of the current fine system. In this section, the percentages of original fines collected by the local courts are examined. By analyzing these percentages according to factors such as court location, violation magnitude, address of defendant, response, and arresting officer, weaknesses and strengths in the current fine system may be identified. This will greatly aid the examination of the effectiveness of Washington's fine system by identifying those areas in which more continued attention should be placed.

Original fines, as used in this study, are the fines imposed on weight violations at the time the citation is issued. They are perfectly correlated with the violation magnitude or weight. The fines have a similar intercept (\$104.00 for a first-time violation as explained in a preceding section) and increase as excess weight increases on a \$0.03 per pound scale (See Figure 2). Original fines in this study ranged from \$110.00 for 200 pounds overweight to \$3,428.00 for a 110,800 pound overload (Table 4). The overall average original fine was \$215.00, indicating the potentiality of recapturing a significant amount of revenue (\$215 times 10,725 equals \$2.3 million) for road repair/reconstruction, provided the defendants are (found) guilty and the finances are used specifically for repairing damaged pavements.

Table 4. Average, Minimum and Maximum Original Fines and Fines Paid In Each County

COUNTY	AVERAGE ORIGINAL FINE	AVERAGE FINE PAID	MINIMUM ORIGINAL FINE	MINIMUM FINE PAID	MAXIMUM ORIGINAL FINE	MAXIMUM FINE PAID
BENTON	205	164	137	50	566	566
CLARK	202	172	125	0	1112	1112
GRAYS HARBOR	187	155	110	0	509	360
KING	220	190	134	0	725	626
KITTITAS	185	169	146	0	509	449
PIERCE	196	154	113	0	560	434
SKAGIT	262	232	143	0	3428	2384
SPOKANE	249	230	140	0	680	641
WALLA WALLA	235	143	140	0	806	314
OVERALL	215	179	110	0	3428	2384

Original fines can either be paid or contested in a District Court. There are three possible dispositions of a contested traffic infraction: Committed (guilty), Not Committed (not guilty), and Dismissed (not guilty). The law reads that a person to whom a traffic infraction has been issued has 15 working days to respond; however, many courts allow 60 to 90 days for a response. If the defendant does not respond within that specified time, the case is charged, by the courts, as committed. Those cases that are contested are given a court hearing during which a disposition of committed, not committed or dismissed is determined. Fines associated with the not committed and dismissed cases are usually dropped or drastically reduced. Fines on committed charges are also frequently reduced although to a lesser degree than not committed and dismissed cases.

Paid cases (uncontested) were the most prevalent, accounting for 63 percent of the sample population (Figure 6). Thirty-three percent of the defendants were found committed, three percent of the cases were dismissed, one percent was not committed, and one case was amended (from "overlegal weight" to "no valid tonnage displayed"). Dispositions of citations included in this study are discussed further in a succeeding section.

Regression analysis is frequently used to determine the statistical relations between two or more variables. Simple linear regressions were run using "percent of original fine paid" as the dependent variable and court location, defendant address, violation magnitude (also original fine as they are directly related), arresting officer, and response (paid versus contested) as independent variables. The factor to be examined from the regression analysis is R^2 or the squared Pearson correlation. R^2 denotes the proportion of variance in the dependent variable accounted for by the independent variable. It measures the linear predictability and ranges from

zero to one. It should be noted that although one is optimal for linear relations, an R^2 near zero does not necessarily imply there is no relationship between the variables because the relationship may be a non-linear one. For simplicity, only tests for linear probability were conducted in this study.

The R^2 's generated in this study were very small (less than 4 percent) with the exception of the equation utilizing "response" as the independent variable: It had an R^2 of 76.7. The following sections contain discussions on the independent variables' effects on the percent of original fine paid.

Court Location

Court location explained only 0.8 percent of the variation in percents of original fine paid on all cases. Additional observances were made to see if further conclusions could be arrived at regarding court location and fine differences.

Percents of original fine paid in each county varied from 67 percent in Walla Walla County to 94.6 percent in Skagit County (Figure 7). One might assume that those counties with POEs place more emphasis on overweight violations because weight enforcement occurs 24 hours a day, seven days a week at POEs and numerous tickets are issued which could potentially be substantial sources of revenue. The assumption may also be drawn that judges in counties with smaller populations tended to reduce fines to a greater extent than the larger metropolitan courts. Although some single court data may support the above assumptions, aggregated analysis negated both postulations (Table 5). Less than one percentage point difference was found in the average percent of fines paid in courts (on all cases) in counties with POEs (81.4

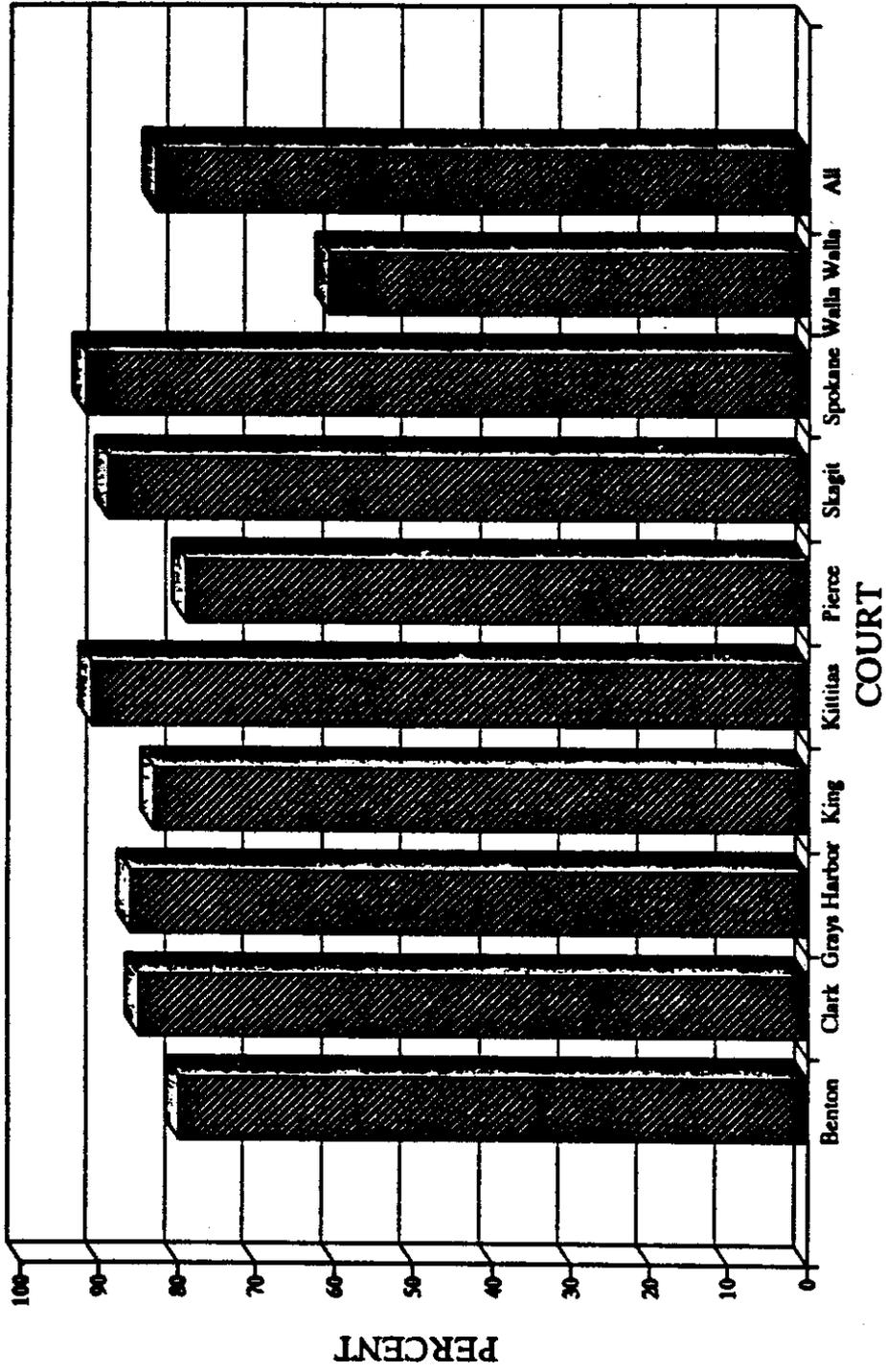


Figure 7. Average Percent of Original Fine Paid on All Cases for Each County

Table 5. Total Citations Issued, Average Original Fine and Percent of Original Fine Paid, and Total Funds Collectible (on All Cases) and Collected in Each County

COUNTY	TOTAL CITATIONS ISSUED	AVERAGE ORIGINAL FINE (dollars)	AMOUNT COLLECTIBLE (dollars)	AVERAGE PERCENT OF ORIGINAL FINE PAID	AMOUNT COLLECTED (dollars)
BENTON*	334	205	68,470	80	54,776
CLARK	2,173	202	438,946	85	373,104
GRAYS HARBOR	552	187	103,224	86	88,773
KING	1,905	220	419,100	83	347,853
KITTITAS	802	185	148,370	91	135,017
PIERCE	966	196	189,336	79	149,575
SKAGIT	1,281	262	335,622	89	298,704
SPOKANE	391	249	97,359	92	89,570
WALLA WALLA*	184	235	43,240	61	26,376

*There were some citations reported being issued in either Benton or Walla Walla counties (actual county was not specified); those citations were divided equally between the two counties for the "Total Citations Issued" category.

percent) and in counties without POEs (84.8 percent). There was also little difference between average percent of original fine paid in those counties with populations of less than 85,000 (81.8 percent) and the larger counties (83.8 percent). In fact, the counties with the lowest and the highest average percent of original fine paid both had populations of less than 85,000.

Percents of original fines paid in committed cases were lower than those for all cases and ranged from 45 percent in Benton County to 82 percent in Skagit County (Figure 8). In the smaller counties (Grays Harbor, Kittitas, Skagit, and Walla Walla), an average of 66.9 percent of original fines were paid on committed cases. The judges in larger counties were more apt to lower fines on committed cases. The proportion of original fines paid in counties with populations over 100,000 was an average of 58.3 percent. A similar case occurred with regards to the location of POEs. Judges in counties without POEs ordered defendants to pay an overall average of 68.4 percent of original fines while those cases heard in counties with POEs were assigned an average of only 58.9 percent of the original fine.

These results reject the hypotheses that judges in smaller counties and counties without POEs diminish the importance of overweight violations and reduce fines to a token of the original amount. For all cases, court location had little influence on the amount of the original fine that was collected. However, with contested cases ruled committed, relationships did exist between court location and fine difference. The courts located in counties with populations over 100,000 tended to have judges who lowered fines to a greater degree than those counties with smaller numbers of residents. This may be a result of lack of education in commercial vehicle weight rules and regulations. Judges in larger counties where violent crimes occur frequently may award precedence to such crimes in the courtroom. This could ultimately result in large

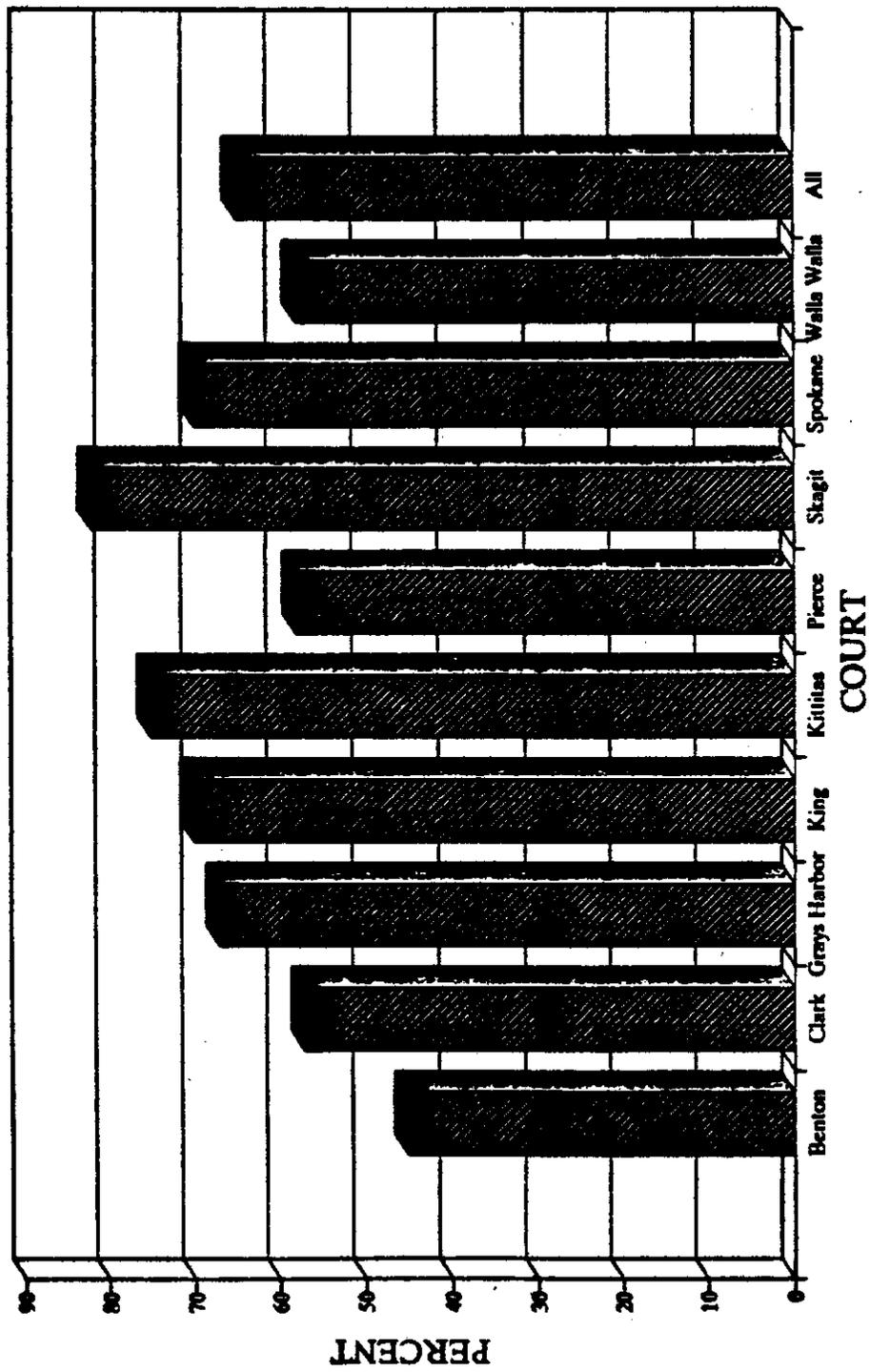


Figure 8. Average Percent of Original Fine Paid on Contested Cases for Each County

reductions on fines for offenses some judges may see as "trivial," including violating truck weight limits.

Defendant's Address

Addresses of defendants were examined to determine whether the location of residence (of the driver) had an effect on fine difference. In Washington, if fines are not paid by the due date, Washington operators' licenses are suspended. There is a reciprocal agreement between Washington and Oregon which allows each state to suspend the other's residents' licenses as well as their own. For those defendants residing in one of the remaining 48 states or Canada, no such recourse can be taken. An out-of-state (OOS) letter may be sent demanding payment, or collection agencies may be utilized to collect the outstanding balances. Due to these regulations, defendants from OOS and Canada should probably have higher numbers of unsettled cases than those from Washington and Oregon. Moreover, percent of original fines paid by OOS and Canadian residents ought to be higher than those for Washington and Oregon residents because the OOSers and Canadians are more likely to pay the ticket than return to Washington to contest it in court, especially if they plan to travel through Washington in the future.

Unsettled cases were defined as those cases in which the defendant had not responded and/or not paid penalties within the allotted time period. Each of these cases had been inactive for a minimum of 5 months (since mid-August 1992). A total of 36 cases (5 percent) were unsettled. Two courts (Kittitas and Pierce) did not have any unsettled cases (Table 6). Unsettled cases in the remaining seven courts ranged from two in Benton County to 11 in Skagit County. A total of 9 unsettled cases in Skagit County were on OOS and Canadian residents

Table 6. Unsettled Cases by County: by Number, Defendants' Places of Residence, and Percent of Cases with Defendants Residing Out of State and in Canada

COUNTY	TOTAL CASES	WA/OR CASES	OOS CASES	CANADA CASES	% OOS & CANADA
BENTON	2	1	1	0	50
CLARK	6	4	2	0	33
GRAYS HARBOR	4	4	0	0	0
KING	5	2	2	1	60
KITTITAS	0	0	0	0	0
PIERCE	0	0	0	0	0
SKAGIT	11	2	2	7	82
SPOKANE	5	2	1	2	60
WALLA WALLA	3	1	0	2	67
TOTAL	36	16	8	12	56

whereas all the unsettled cases in Grays Harbor were on tickets issued to Washington and Oregon residents. This was probably due to county location and local truck movements. Five courts had at least 50 percent of their unsettled cases on defendants from OOS or Canada, suggesting that many OOS and Canadian residents are currently not paying for any of the damage they cause to Washington's roads and highways.

The percent of original fine paid on all cases by defendants' addresses is depicted in Figure 9. Canadian residents paid an average of 99.5 percent of the original fine on all cases and OOS residents paid an average of 93.4 percent of original fines. Those defendants residing in Washington and Oregon paid less of the original fine on all cases than those from OOS and Canada. Washington residents paid an average of 83.2 percent of the original fine while Oregon residents only paid 80 percent of the original fines on all cases. This suggests that those defendants who live in Canada or a state other than Washington and Oregon tend to pay their tickets rather than return to Washington to contest their case in court. This finding is further evidenced by the actual percentages of cases that are contested versus paid. Of the contested cases, 78 percent of Canadians were ordered to pay and paid their tickets, while 93.4 percent of OOS residents were ordered to pay and paid their tickets. The OOS residents who contested their tickets were all from the neighboring state of Idaho.

The relationship between address of defendant and percent of original fine paid on contested cases was similar to that of paid cases (Figure 10). Canadian residents paid the highest average, 98 percent of the original fine. A majority of these (88 percent) were identified as contested because defendants failed to respond to the court within the allotted time. After notices informing defendants of their failure to respond were issued by the courts, tickets were

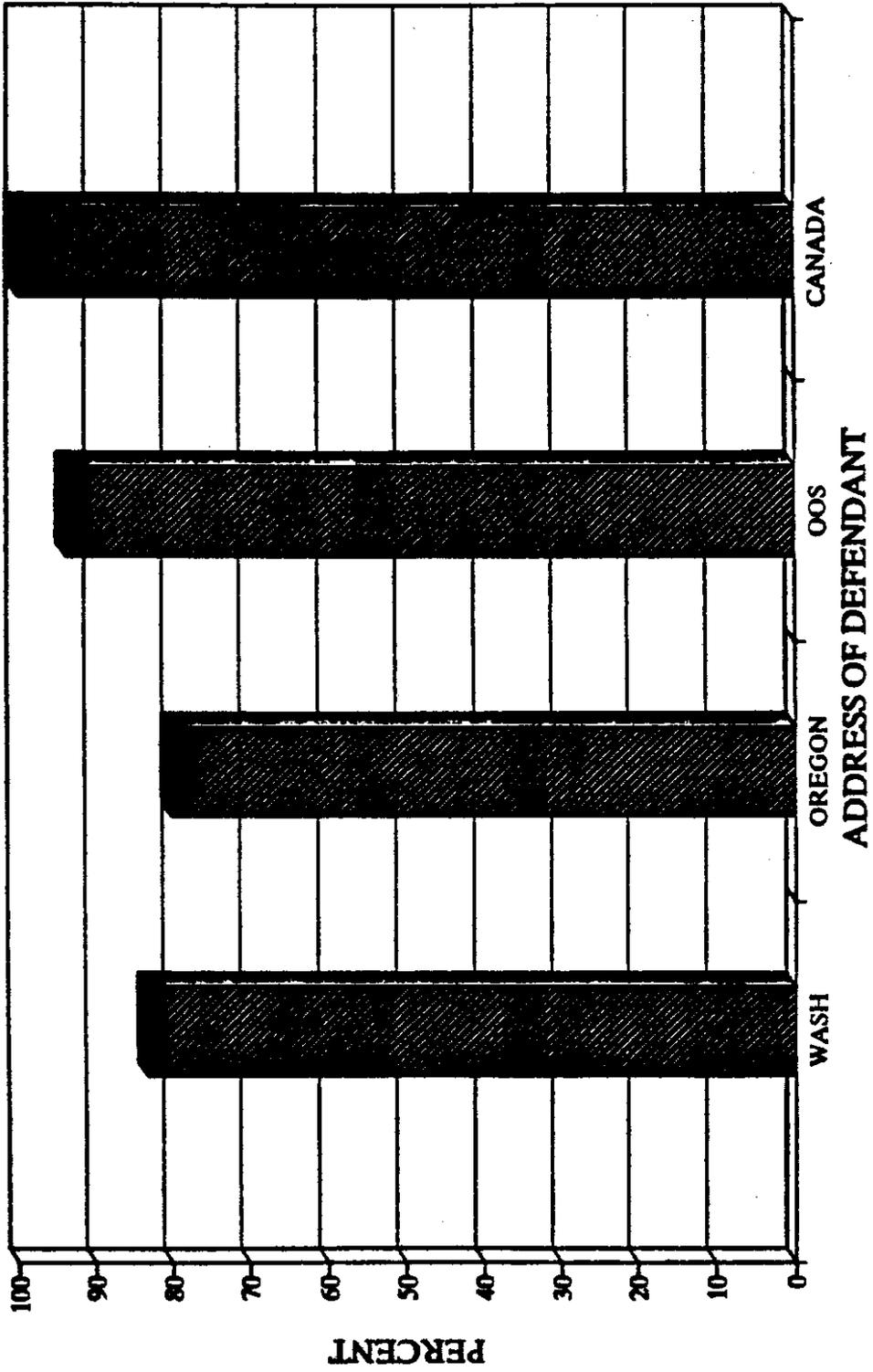


Figure 9. Percent of Original Fine Paid on All Cases by Address of Defendant

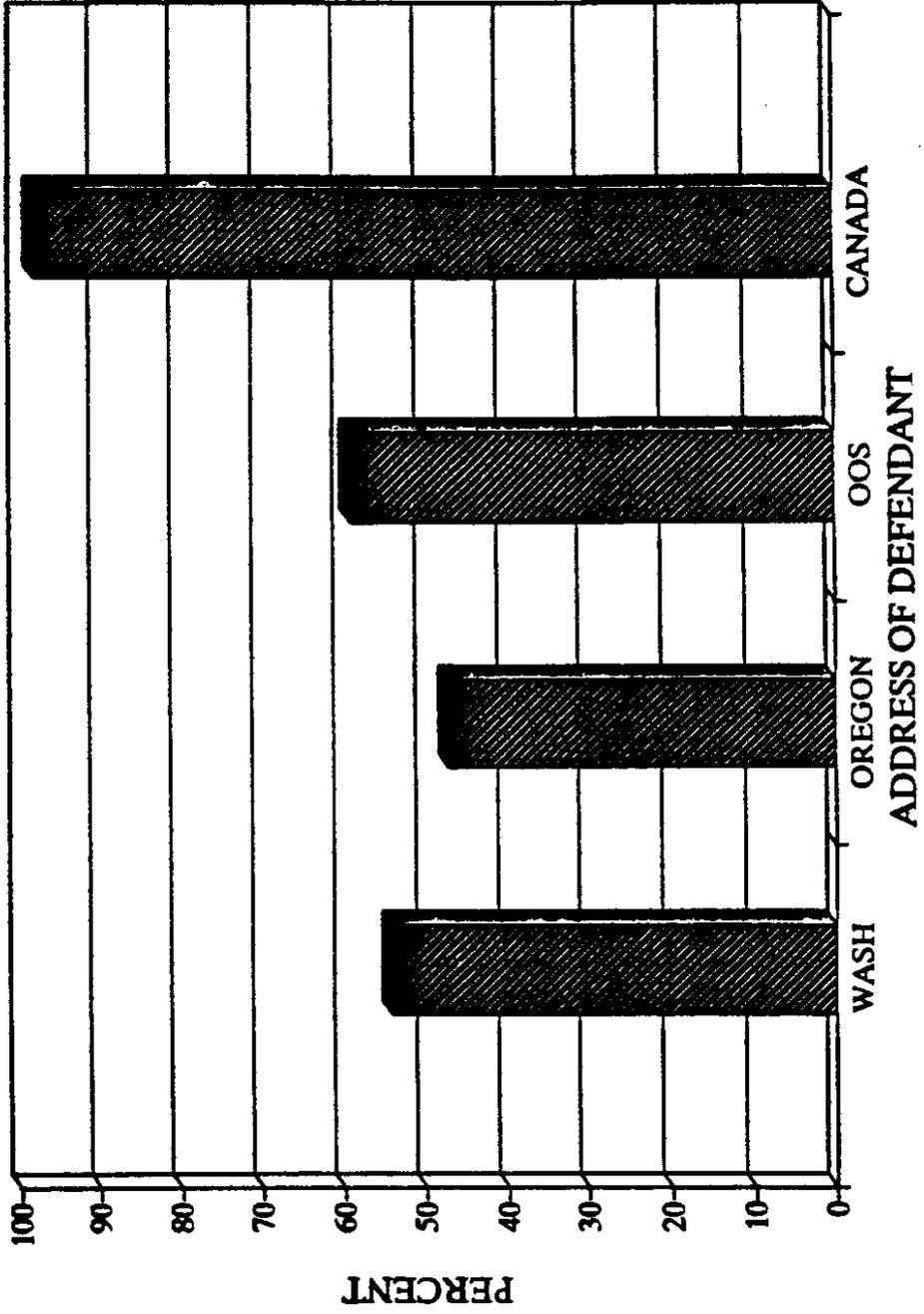


Figure 10. Percent of Original Fine Paid on Contested Cases by Address of Defendant

often paid in full, resulting in 100 percent of the original fine being paid on a contested case. OOS residents paid an average of 59 percent and Oregon residents paid an average of 47 percent. These numbers suggest that some judges may be more reluctant to lower fines on violations committed by defendants from OOS and Canada, or tend to be more lenient with Washington and Oregon residents. This may be another explanation as to the high percentage of Washington and Oregon residents that contest their cases compared to those from Canada and OOS.

Defendants' addresses seemed to account for little of the variance in fine differences according to the regression analysis however additional analyses (R^2 was .002 for all cases and .019 for contested cases). However, a relationship may be interpreted between the two variables. While defendants from Washington and Oregon tend to contest cases, those from OOS and Canada frequently pay their tickets. However, Canadians and OOSers are more frequently involved in neglecting to pay or contest their tickets, thus becoming parties in unsettled cases. Due partly to the Washington/Oregon reciprocal agreement regarding driver's license suspension, the residents of these two states are more apt to settle their cases than those who live OOS and in Canada.

Violation Magnitude

A positive correlation is indicated between excess weight and fine amount. Fines for very heavy trucks can be costly and may mean those caught with excessive overloads are more apt to contest their citations than those with lesser fines. The number of cases that were contested versus paid (not contested) for varying weight violations are depicted in Figure 11.

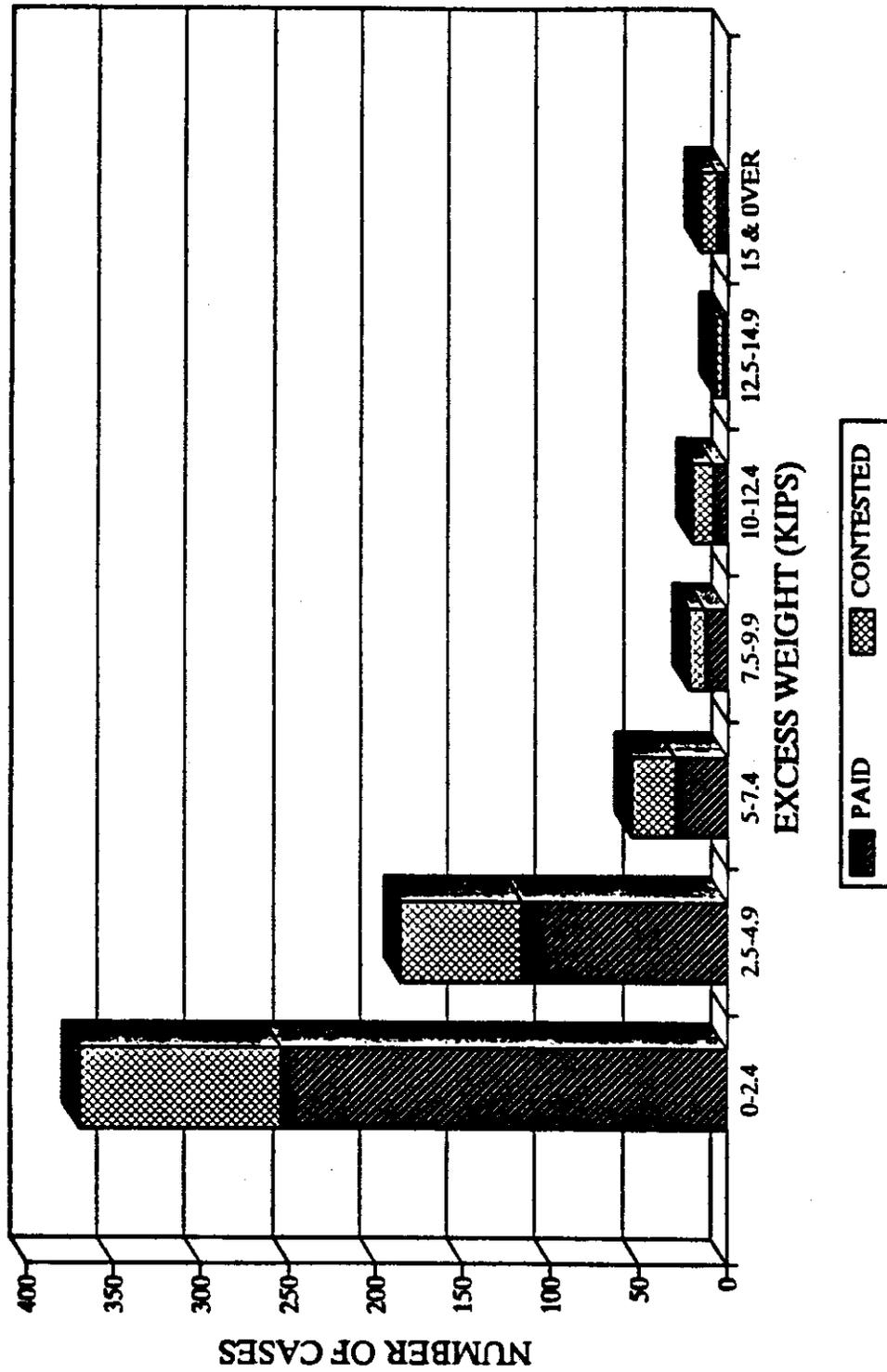


Figure 11. Case Pleas/Responses for Various Excess Weight Categories

Most violations were in the 0 to 2.4 Kip (Kip = 1,000 pounds) overweight category and most (68.8 percent) of those tickets were paid. As excess weight increased, there was an increase in the percentage of contested cases versus paid cases. This suggests that truckers who have tickets with large penalties believe they can get the fine reduced if their case is heard before a judge. With the lower fines it may be more efficient to pay the ticket rather than take the time and effort to contest it in court.

The average percent of original fines paid on all violations of varying excess weights are displayed in Figure 12. The percent of original fine paid decreased as excess weight increased. Exceptions were found in the 12.5 to 14.9 Kip overweight group, where 3 percent more were contested than in the 10 to 12.4 Kip group (43 percent versus 40 percent). For 0 to 2.4 Kip overloads, 69 percent of the cases were paid while only 35 percent of the 15 and over Kip overloads were paid. The percentage of cases in the heavier excess weight categories increased. Similarly, larger fines were reduced to a greater degree than the smaller ones. However, the extent of these practices was found to be small. The two largest percent of original fines paid on contested cases occurred in the 12.5 to 14.9 Kip and 15 & Over Kip excess weight categories where an average of 76.4 percent and 71.2 percent of the original fines were paid, respectively (Figure 13). Perhaps judges realize the seriousness of overweight violations and therefore do not always drastically reduce the larger fines. Results suggest that some judges realize the very heavy trucks are causing immense damage to pavements and feel that violators should be held financially accountable.

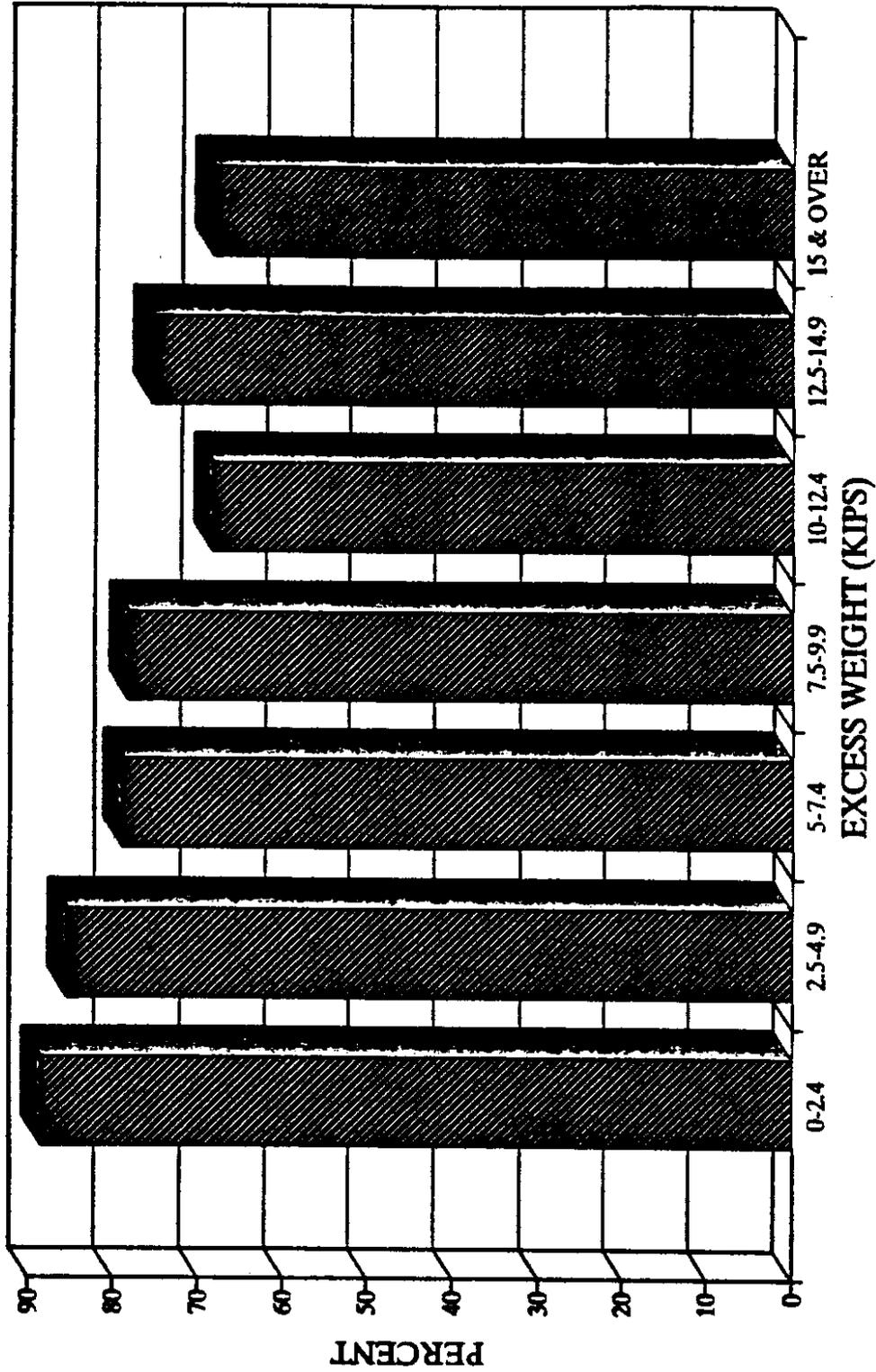


Figure 12. Percent of Original Fine Paid on All Cases for Various Excess Weights

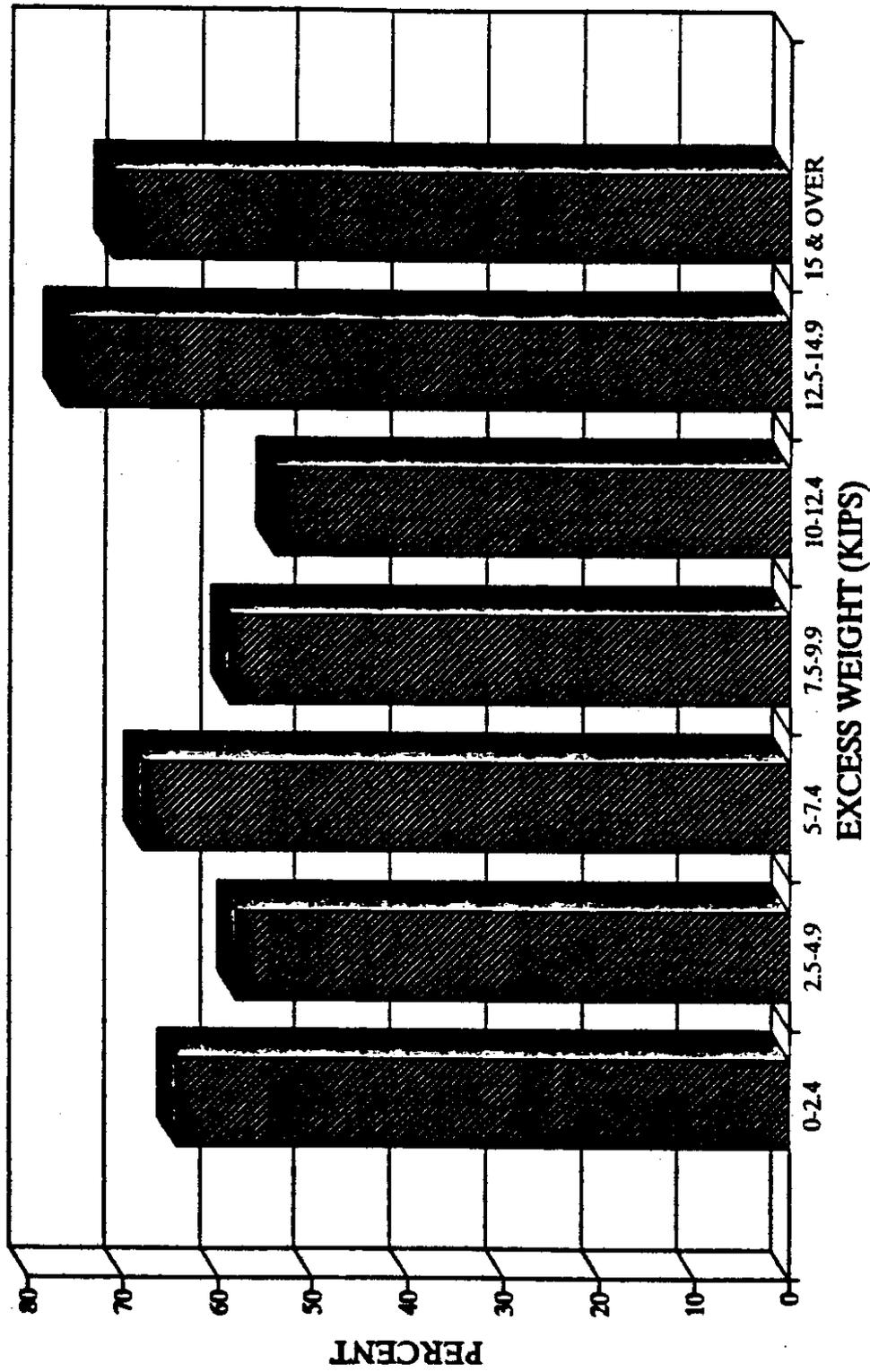


Figure 13. Percent of Original Fine Paid on Committed Cases for Various Excess Weights

Arresting Officer

CVEOs also feel those who illegally operate overweight vehicles should be held responsible for their actions as evidenced by the numbers of citations issued and minimum excess weights for which truckers are cited. Some CVEOs are involved in both steps (weighing and legal processes) of Washington's weight enforcement system. During the county survey regarding participation in commercial vehicle weight enforcement, it was found that there are varying levels of CVEO involvement at the legal/court level. Most counties provide their own prosecutors for overweight cases but some officers actually act as prosecutors on cases for which they were the arresting officer. Others are called on as witnesses. Some attend hearings as observers and some officers have never attended a trial on an overweight case.

Regression analysis on contested cases generated an R^2 of 0.0013 indicating little of the variation in fine difference was accounted for by the arresting officer on contested cases. A regression was also run on arresting officer and case response. An R^2 of 0.0015 was generated indicating officers have very little influence on whether cases are contested or paid. In this study, 182 CVEOs issued at least one ticket, and 61 of those had tickets that were contested. This makes it difficult to analyze the relationship between officer and percent of original fine paid on cases that went to court. Moreover, without additional information on officers' roles in the court process, conclusions on arresting officer and fine difference would be difficult to make and would be suspect. However, from interviews with CVEOs, it is apparent that officers are dedicated to enforcing Washington's weight limits and regulations, and are enthusiastic about participating in programs aimed at improving the current fee and fine and overall weight enforcement systems.

Response

As mentioned in a preceding section, a ticket on an overweight violation can either be paid or contested in court. Response (by trucker) should have a noticeable effect on percent of original fine paid. Tickets that are paid constitute 100 percent of the original fine, while contested tickets vary between 0 and 100 percent. Regression analysis showed an R^2 of 0.77 which indicates a large percentage of the variation in fines is due to response. The average percent of original fine paid on contested cases was 56.3 percent. This included averages of 63 percent on 220 committed cases, 14 percent on one amended case, 2 percent on 19 dismissed cases, and 0 percent on seven cases found not committed.

The 63 percent on committed cases illustrates that 37 percent of potential revenue is being "lost" in the court system. Judges most frequently assigned penalties of 61-70 percent of the original fine (Figure 14). The next most frequent percentages were 41-50 percent and 91-100 percent, illustrating that some judges are lenient while others are stringent when it comes to assigning charges for weight violations. It should be mentioned that not all cases that are classified as committed have gone through a court hearing. The cases that are issued "Fail To Respond" notices and then are paid in full are categorized as committed since there was no response within the legally allotted time. These are relatively few in number (five) and appear in the 91-100 percent of original fine paid on a committed case category. They would bias upwards the percent received from the courts, but also reflect the courts' efforts in collecting fines.

Often reductions in fines reflect circumstances surrounding the case and may not be avoided. However, in some cases, fines are reduced to a token of their original amount for

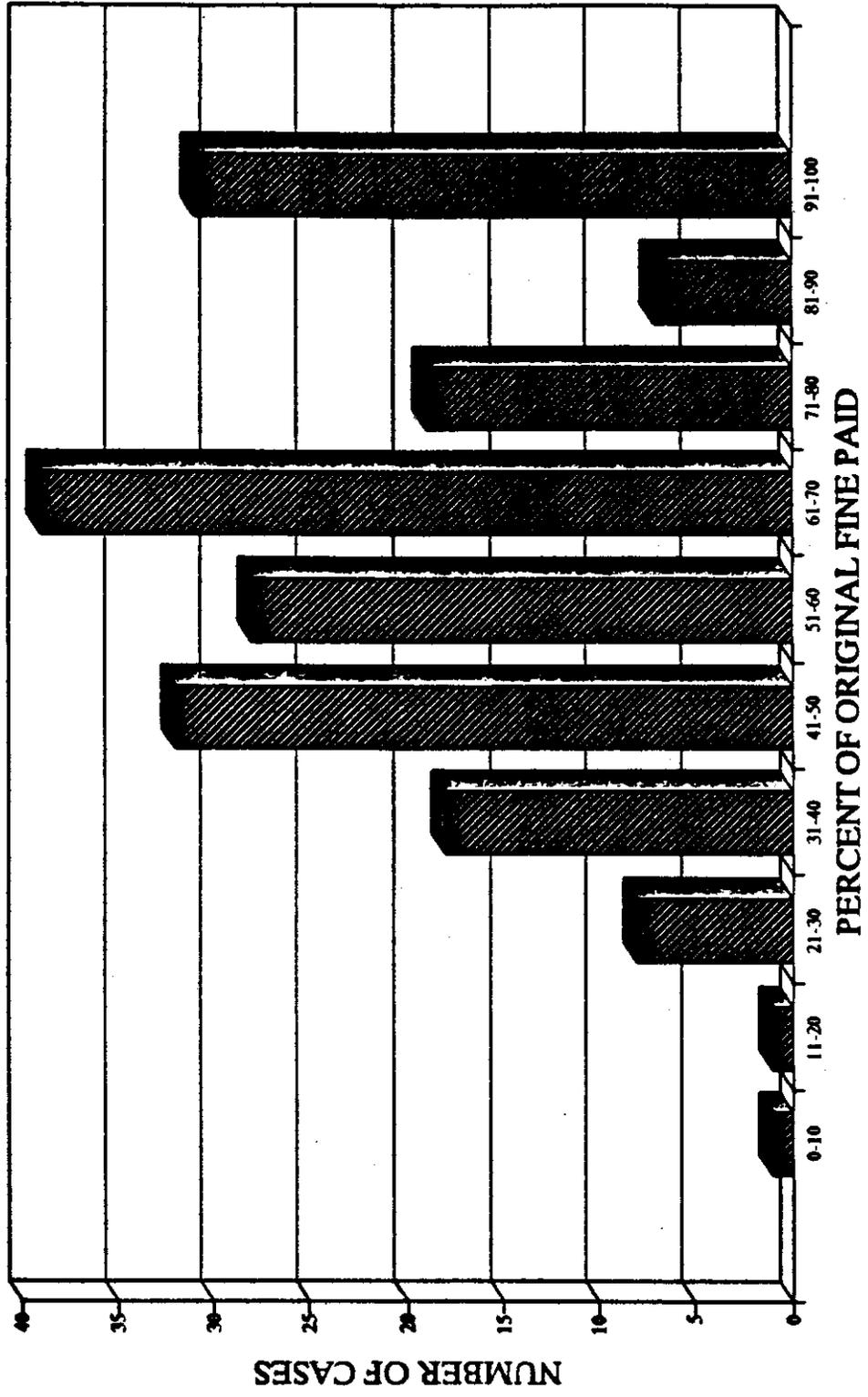


Figure 14. Percent of Original Fine Paid on Committed Cases

reasons many law officers , in interviews, considered unjust. Penalties of \$50.00 each were imposed on two dismissed cases. Judges will periodically impose small penalties or "court costs" on dismissed cases. Revenues from these charges are split between the local court and the state on the same basis as other overweight fines.

While the fine difference for a non-contested paid response is always zero, fines will tend to vary for a contested response depending on the disposition, case evidence, and the trial judge.

Fine Collections

Average original fines were computed for each disposition. The one Amended case had a fine of \$332.00 while the averages of the four other dispositions were as follows: Dismissed = \$295.00; Not Committed = \$288.00; Committed = \$236.00; and Paid = \$198.00. The total number of citations issued between September 1991 and August 1992 was 10,388 (See Footnote 2). Therefore, the total amount of assessments collected during the sample period was \$2.2 million, based on dispositions as a percentage of total cases (See Figure 6) and the average original fines shown above. Paid cases reflected 100 percent of the original fine so \$1,302,048 was collected on paid dispositions. There were 36 unsettled cases which were classified as committed cases (through hearings and failure to respond). They were used in the calculation of average original fines for cases with committed dispositions; however, they are separated into an individual category for the following analysis. The maximum collectable amount on the unsettled cases was \$130,036. None of that money had been collected as of January 1, 1993. Sixty-three percent (\$247,639) of the total possible \$669,296 was collected on committed cases. Only 2 percent (\$1,374) of the possible \$68,676 was paid on cases that were dismissed while

all the \$29,952 of charges on cases that were found not committed was dropped and thus not collected. Amended cases were charged an average of 14 percent of the original fine resulting in \$976 being collected from the possible \$5,996. The total civil assessments collected during the year was \$1,801,005 or 82 percent of the maximum possible.

Only 43 percent of the revenues on weight violations goes to the state (Figure 15). The remaining 57 percent stays in the local courts, where it is used for various purposes; 1.75 percent of the total must be used for state approved victim witness programs. All the money received by the state (\$774,432 in this case) is deposited into the PSEA. Currently, no funds are appropriated from the PSEA to accounts designated for road and highway repair and reconstruction. Instead they are utilized to support a collection of justice-related programs. Hence, none of the funds collected from traffic infractions are actually used for road repair and reconstruction. Those funds come from tax revenues and federal government contributions.

Repeat Offenders

Repeat offenders in this study are those companies or individuals who are cited for operating overloaded trucks more than once during a 12-month period or in this case, the sample period. However, the legal connotation of a repeat offender according to RCW 46.44.105 is one who, in a 12-month period, commits more than one violation per vehicle or combination of vehicles under the same ownership. The definition of repeat offenders in RCWs is a tolerant one because it permits the same company or individual to repeatedly overload without incurring any additional penalties as long as different trucks are being cited.

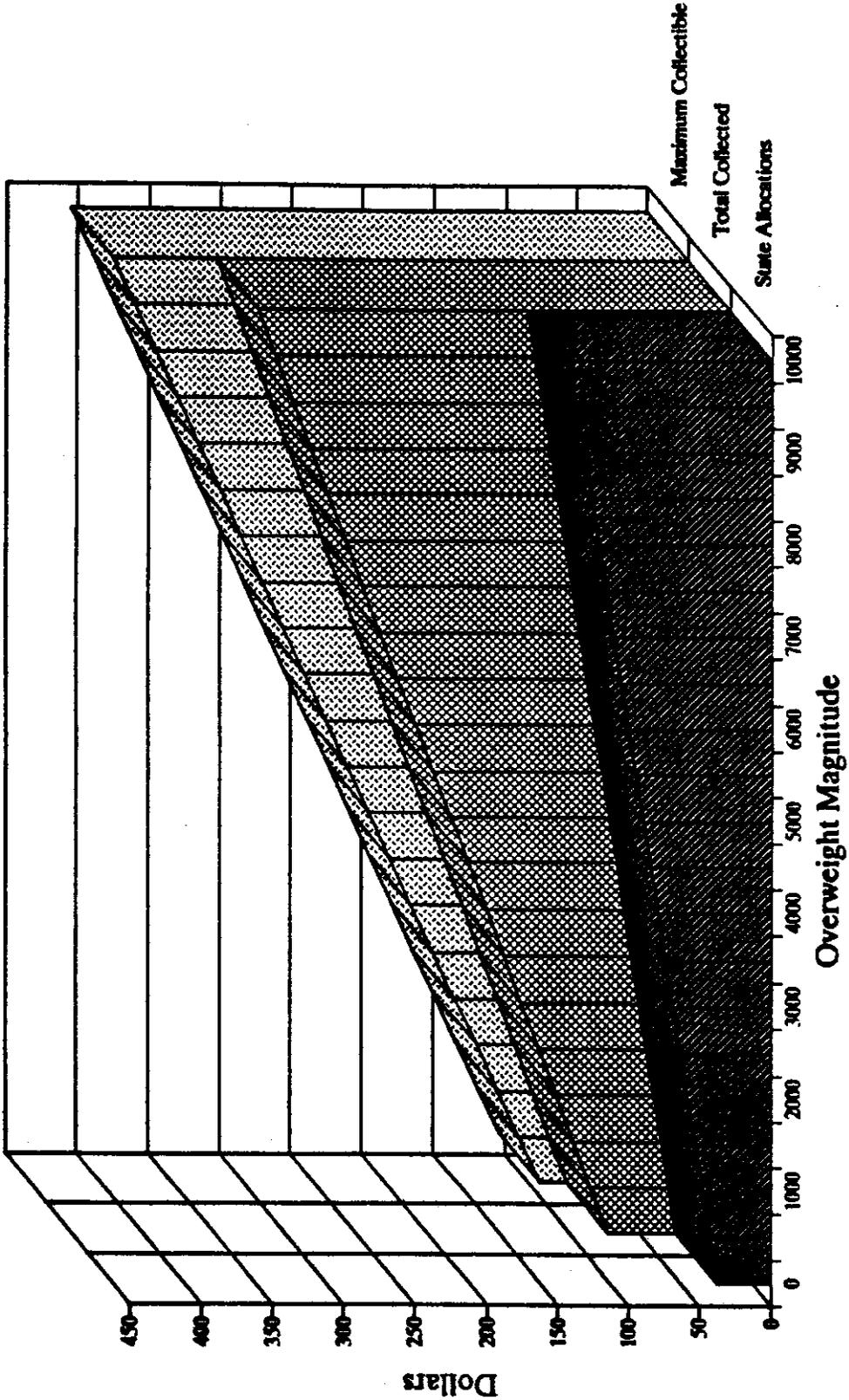


Figure 15. Fine Amounts for Various Overloads, Average Fine Collected by Courts and Amount Appropriated to the State's Public Safety and Education Account

Five of the nine counties had repeat offenders (our definition is used in the remainder of this report). A total of 20 (3 percent of the sample population) individuals or companies were cited at least twice for overweight violations during the year. Grays Harbor County had eight repeat offenders, one who was cited four times. However, it appears these infractions must have occurred on different trucks because bail for each of the four cases was set at \$104.00, indicating the base penalty for a first-time conviction of \$55.00 was used. The entire sample population had bail amounts set at \$104.00, suggesting all charges were treated as first-time convictions.

Pierce County had five repeat offenders. Three of these were cited three times during the 12-month period and two were cited twice. Walla Walla County had three repeat offenders. Benton and Kittitas Counties had two each and were each cited twice during the year.

Two-thirds of the repeat offenders paid their tickets. Of the 15 (33 percent) citations that were contested, 13 were charged as committed, one was found not committed and one was dismissed. There was little correlation between defendant and response. There were some who contested one ticket and paid (not contested) the other. Only three offenders contested both their tickets; all six of the cases involved hearings in which fines were reduced.

Repeat offenders accounted for only 3 percent of the sample population. The magnitude of the violations for which they were cited were not excessive (an average of 3,673 pounds) and a majority opted to pay the penalties. From the bail amounts, it can be concluded that all violations committed by these repeat offenders were first-time convictions. Therefore, it does not appear that repeat offenders are contributing to pavement deterioration or shifting the

financial responsibilities of road repair to taxpayers to a much greater degree than those who are cited only once in a 12-month period.

Time Lapses Between Issue Date and Settlement Date

District courts use various methods (letters to defendants, collection agencies, etc.) to collect money owed to them through weight and various other violations. Time lags between citation issue date and case settlement date were examined to determine the efficiency of courts in collecting fines. Those who are issued a citation for violating weight limits are granted (by law) 15 working days to either pay their ticket or request a court hearing. However, many courts in Washington allow anywhere from 60 to 90 days for a response. During this time, a reminder notice or warning may be sent to the defendant, often resulting in payment or response. A \$47.00 court cost or "late" fee is often charged by courts if response times are prolonged. This fee stays within the local court system.

Time lapses between the citation issue date and actual settlement date were examined by court location and response to determine if weaknesses exist in the timeliness of the collection process. The overall time lag between the ticket issue date and case settlement date by counties ranged from 30 days in Kittitas County to 49 days in Clark and Skagit Counties (Table 7). Hence, most settlements on weight violations occur within two months of the ticket issue date. Maximum time lags by county ranged from 120 days in Kittitas County to 442 days in Skagit County. Although longer time lapses may be perceived negatively, schedules for court hearings may occasionally be full, requiring longer waiting periods on contested cases.

Table 7. Time Lapses Between Date Violation Occurred and Date Case was Settled in Each County

COURT	AVERAGE	MINIMUM	MAXIMUM
BENTON	44	3	256
CLARK	49	3	276
GRAYS HARBOR	32	0	161
KING	42	6	213
KITTITAS	30	4	120
PIERCE	34	4	229
SKAGIT	49	4	442
SPOKANE	35	7	211
WALLA WALLA	45	6	357
OVERALL AVERAGES	40	4	252

NOTE: Averages, Minimums and Maximums are reported in number of days, including weekends and holidays.

Time lags between issue and settlement dates were analyzed by response. A regression analysis was performed using time lapses as the dependent variable and case response (contested versus not contested) as the independent variable. An R^2 of 0.19 was generated indicating response accounted for only 19 percent of the variation in the time it took to settle a case. As predicted, paid cases had the shortest period between dates with an average of 25 days. Some cases with paid dispositions were collected in periods of more than 90 days, probably on time payment schedules. Contested cases will obviously have longer time lapses due to scheduling of hearings. Committed cases had an average time lapse of 69 days while dispositions of not committed had average time lapses of 71 days. Cases that were dismissed were settled in an average of 90 days.

Time lags between dates tickets were issued and dates fines were collected tended to be similar at all court locations. Much of the time lags were due to the scheduling of court hearings scheduling and most courts seemed to schedule hearings within two months of the citation issue dates. As expected, paid cases were settled in a shorter period (approximately one-third of the time) than were contested cases.

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ACRONYM AND ABBREVIATION DEFINITIONS

AASHTO	American Association of State and Highway Transportation Officials
CJTC	Criminal Justice Training Commission
COMP	Compensation Allocations
CVEO	Commercial Vehicle Enforcement Officer
CVES	Commercial Vehicle Enforcement Section
DCD	Victims Advocacy and Legal Aid
DOL	Department of Licensing
DSHS	Department of Social and Health Services
DS-CJTC	Debt Service (CJTC Building)
ESAL	Equivalent Single Axle Load
L&I	Labor and Industries
OAC	Office of the Administrator for the Courts
OAG	Office of the Attorney General
ODOT	Oregon Department of Transportation
OOS	Out of State
POE	Port of Entry
PSEA	Public Safety and Education Account
RCW	Revised Code of Washington
SPI	Superintendent of Public Instruction
TRB	Transportation Research Board
TSC	Traffic Safety Commission
WL	Department of Wildlife
WSDOT	Washington State Department of Transportation
WSP	Washington State Patrol

APPENDIX A

DETERMINING SAMPLE SIZE

DETERMINING SAMPLE SIZE

The following formula was used to determine sample size:

$$n = \frac{z^2 \sigma^2}{E^2}$$

Key variables were:

\bar{X} = sample mean (unknown, but will be the center of our confidence level)

σ = known or estimated standard deviation of the population

E = allowable error we are willing to accept

Z = number of standard error units corresponding to desired level of confidence

n = sample size

The following values were assigned to the error and confidence level variables:

E = \$25.00

Z = 2.58 (for 99 percent confidence level)

<u>COUNTY AND EQUATION</u>	<u>MINIMUM SAMPLE SIZE</u>	<u>ACTUAL SAMPLE SIZE</u>
<u>Benton County</u>		
$n = \frac{6.6564 * 3253.39}{625}$	34.65	75
<u>Clark County</u>		
$n = \frac{6.6564 * 3840.72}{625}$	40.9	75
<u>King County</u>		
$n = \frac{6.6564 * 3461.359}{625}$	36.86	75
<u>Grays Harbor County</u>		
$n = \frac{6.6564 * 5946.541}{625}$	63.33	75
<u>Kittitas County</u>		
$n = \frac{6.6564 * 998.6}{625}$	10.64	75

COUNTY AND EQUATION

MINIMUM
SAMPLE SIZE

ACTUAL
SAMPLE SIZE

Pierce County

$$n = \frac{6.6564 * 5454.21}{625}$$

58.09

75

Skagit County

$$n = \frac{6.6564 * 904.53}{625}$$

9.63

75

Spokane County

$$n = \frac{6.6564 * 2549}{625}$$

27.15

75

Walla Walla County

$$n = \frac{6.6564 * 4792.01}{625}$$

51.04

75

