

COMMENT: THE COST OF NO-FAULT

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INTRODUCTION

Lawson, Heidrick, and Soular (LHS) present three criticisms in regard to Johnson-Flanigan-Weeks' (JFW) study "An Empirical Investigation of the Costs of Adopting No-fault Insurance Systems: 1971-1980," *Journal of Insurance Regulation*, December 1983. The JFW study found that no-fault has the effect of increasing the cost of automobile insurance. The purposes of this comment are to respond to the LHS criticisms and to present support for the conclusion of the previous study.

OTHER INDEPENDENT VARIABLES

First, LHS fault JFW for omitting independent variables—specifically no-fault threshold levels and no-fault benefit levels. A number of independent variables were controlled: population density, price level, and fatalities per vehicle registration. The nature of this type of social science research is that neither the presence nor the level of all experimental factors can be controlled for except in an ex-post facto, quasi-experimental fashion. The authors did not intend to imply that the impact of all factors were being controlled. Indeed, JFW recognized and acknowledged that factors, such as political and legal climates, speed limits, oil shortages and environment, may account for premium cost behavior. However, there is no reason to believe that these variables are highly correlated with the type of reparation system, and therefore, no reason to believe that their presence or absence would affect conclusions about the impact of the reparations system or premium costs.

LHS present evidence of the significance of thresholds on the cost of no-fault. The reader is cautioned to note that their evidence is a comparison between actual costs and estimates of what cost would have been. JFW used actual data throughout and arrived at the conclusion that the cost of the reparation system is higher in states that adopt no-fault. JFW used Insurance Services Office's data 1971-1980 for 47 states and employed the tricotomy: true no-fault, add on no-fault, and optional no-fault after the Insurance Information Institute classifications.¹ Even setting this issue aside, the reader should note that LHS' evidence about thresholds and benefit levels does not invalidate the JFW findings.

JFW compared the cost of automobile reparation systems and found that no-fault is associated with higher costs. LHS merely elaborate upon the JFW classification scheme effectively explaining that some of the reasons no-fault, add-on, or optional no-fault costs more is because of the presence of varying threshold and benefit levels. The fundamental JFW conclusion stands: no-fault costs more. LHS elaborate but reinforce the conclusion.

LHS' conclusion is that all states are different. JFW grouped states based on reparation system classifications and made inferences. The statistical support was strong for the conclusion that states can expect marginal cost increases when adopting no-fault.

SELECTION BIAS

The second criticism has to do with selection bias and again the appropriateness of cross-sectional analysis altogether. LHS suggest states most likely to adopt no-fault are those already suffering high growth in insurance costs. Thus, LHS argue, the high cost states selected no-fault as a cost reduction strategy and, not surprisingly, still showed up high cost. LHS suggest that the appropriate strategy is to study the growth and level of insurance costs before and after adoption of no-fault.

Five states changed to no-fault during the period of time encompassed in the original Johnson-Flanigan-Weeks (1971-1980) study and had complete data available from the ISO.² These states include Georgia, Kentucky, Hawaii, Colorado (which changed to no-fault) and Arkansas (which changed to add-on).

For each of these states, the arithmetic average of the annual increases over the previous year in pure premiums was calculated for: (1) the period before the change to no-fault and (2) the period after the change to no-fault. Table 1 presents these before and after averages of annual changes in pure premium.

Table 1

ANNUAL CHARGES IN PURE PREMIUM

Year Changed To No-fault	Average of Annual Charges Before	Average of Annual Charges After
Georgia	1974	- 89 11.93
Kentucky	1974	- 53 7.30
Hawaii	1973	1.14 14.53
Colorado	1975	4.88 8.20
Arkansas	1974	-.09 2.60

Two implications come readily from perusal of Table 1. First, there is no basis for LHS' assumption of selection bias. Clearly it is not true, at least in terms of growth rates, that those states which adopted no-fault "had the highest and most rapidly growing costs prior to no-fault." Three of the five states had average annual rates of change that were negative. Second, it is clear the average of the annual rates of change is higher after than before.

LHS point to the hazard of cross-sectional analysis—namely, it is impossible to allow for all possible contaminating factors. On the other hand, the hazard of time series analysis is the possibility of adducing causation to the wrong underlying trend. Cognizant of this, similar calculations were undertaken for all states that did not adopt no-fault for the appropriate years before and after each of the five states presented above. The data is presented in Table 2.

Table 2

ANNUAL CHARGES IN PURE PREMIUMS FOR STATES WITHOUT NO-FAULT

	Year Changed to No-fault	Average of Annual Charges Before	Average of Annual Charges After
Georgia	1974		11.93
22 States		3.35	9.28
Kentucky	1974		7.30
22 States		4.64	8.83
Hawaii	1973		14.53
22 States		5.80	7.49
Colorado	1975		8.20
22 States		5.80	7.49
Arkansas	1974		2.60
22 States		5.80	7.49

The reader is reminded that part of the uniqueness of the JFW study is that it covers the entire decade. Lilly and Webb had much more complete data but did not reach back as far.³ The ISO data had the advantage of greater duration but approximately 4 percent of the data was missing. Unfortunately, only the five no-fault states noted above are available in complete form. However, the results are consistent across these five states and with those found when analyzing those states without complete data.

REGRESSION ANALYSIS

The third LHS criticism has to do with the regression model. LHS correctly point out that heteroscedasticity and autocorrelation in the error terms in the regression model probably exist and, if so, reduce the efficiency of the regression coefficients estimates. The regression coefficients are still unbiased and consistent even if the usual tests of statistical significance are no longer valid." While the parameter estimates may be imprecise because of these problems, the results of Tables 1 and 2 seem to indicate these statistical estimation problems do not affect the JFW conclusion that no-fault increases the cost of automobile insurance.

CONCLUSION

LHS fault JFW on other independent variables, selection bias, and regression analysis. This comment effectively rebuts each of these. The process leads the writers not only to reiterate but to reinforce their earlier conclusion: no-fault legislation increases the cost of the automobile repair systems.

NOTES

1. *Insurance Facts*, various years. over the 1970-80 decade tracks the development of no-fault.
2. The reader will recall that JFW used ISO data 1970-80; using the pooled regression technique if a data point, a year's observation, was missing, the state did not necessarily have to be discarded; in the time series analysis, full data is required; consequently, the states of Delaware, Missouri, South Dakota and Virginia are discarded because of one or more years of missing data.
3. See, Claude Lilly and Bernard Webb, "No-fault: A Review of Its Cost," 2:2, *Journal of Insurance Regulation*, December, 1983.