Newspaper Coverage of Automotive Product Liability Verdicts

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Media coverage of litigation may affect perceptions and thereby behavior of litigants, judges, juries, legislators and business decisionmakers. Their behavior influences various legal, social, political and economic outcomes. For product liability verdicts during 1983 to 1996 involving automobile manufacturers, we examine the amount of coverage in several dozen newspapers. We find almost no articles reporting on any of 259 verdicts for the defendant. Econometric analysis focuses on determinants of the amount of coverage of 92 verdicts for plaintiffs, 16 of which include punitive damages. Key determinants include the award amount, the nature of injuries, the vehicle's recall history, and especially the existence of a punitive component of damages regardless of its size.

Beliefs about the outcomes of tort litigation—by citizens, attorneys, judges, juries, legislators and business decision-makers—may have wide-ranging effects. This article analyzes econometrically a potentially important element in the formation of these beliefs: newspaper coverage. We analyze factors that contribute to the extent or amount of coverage in dozens of newspapers, but do not analyze or interpret the content of articles.

Beliefs about the world of tort litigation can affect a diverse array of decisions and thereby affect legal, social, political and economic outcomes. The claiming behavior of injured individuals is likely to depend on their beliefs about the likelihood of prevailing in a lawsuit and the likely magnitudes of damage awards. Attorneys are likely to choose specialties—for example, whether to focus on personal-injury cases, and if so, what types—

on the basis of their beliefs about the frequency and magnitudes of damages. The behavior of judges and juries in individual trials may be affected, for example, by their beliefs about whether the tort system tends to advantage plaintiffs or defendants, whether there is "too much litigation," and even whether the system is "out of control." The ability of tort-reform advocates to influence legislation depends on the beliefs of legislators and voters about the nature of the tort system, and advocates' influence on appellate court decisions, for example, depends on the beliefs about the system by appellate judges. Finally, the economic effects of the tort system are determined in large measure by its effects on business decisions—in the case of product liability, for example, effects on decisions about the design, manufacture and labeling of products—and such decisions depend on the beliefs of business decisionmakers about incentives stemming from the tort system.

The beliefs about the tort system among members of these groups depend on the information they obtain and how they process this information.[1] There is ample reason to suspect that mass media reporting of litigation events plays an important role in shaping the beliefs of members of the various groups. One reason is that comprehensive, systematic information about the world of tort litigation does not exist (see, e.g., Galanter et al. 1994). Another reason is that virtually all members of some groups—for example, citizens, potential claimants—and many members of the other groups are unlikely to be exposed to the systematic information that does exist. Many members of these groups are, however, exposed to mass media—including newspaper—reports about litigation and word of mouth generated by them. Thus newspaper coverage of litigation is likely to affect—through beliefs of various groups—legal, social, political, and economic outcomes.

Moreover, newspaper coverage may affect business decisions—and economic outcomes of the tort system—through routes other than effects on decisionmakers' beliefs about the workings of the tort system. First, newspaper reporting of litigation can contribute to indirect effects of litigation that are costly to companies, such as responses by regulators or customers.[2] If company decisionmakers perceive such potential costs, then prospects for newspaper coverage could affect their decisions. Second, media attention to allegations about injurious, negligent or even heinous company behavior is itself costly to companies.[3]

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[1] For example, the extent to which interpretation of whatever information is obtained is distorted by well-documented heuristics and biases (Tversky & Kahneman 1974; Slovic, Fischhoff, & Lichtenstein 1982).

[2] For an analysis of corporate responses to product liability risks, including the roles of indirect liability costs, see Garber 1998.

[3] As emphasized by Fisse and Braithwaite (1983:232–33), adverse publicity can involve detrimental "nonfinancial"—economists might prefer the term "intangible"—con-

The potential for litigation to fuel newspaper reports of such allegations may, then, affect business decisions. The importance of these mechanisms by which media coverage in general and newspaper coverage in particular could affect business decisions—and economic outcomes—depends on how various decisions affect such factors as: the likelihood, extent and outcomes of litigation; how characteristics of litigation affect the extent and nature of coverage; and the tangible and intangible consequences of such coverage.

In this article we develop quantitative information about the extent and determinants of newspaper coverage of a narrow slice of the world of tort litigation: trial verdicts in personal injury, product liability litigation involving automobile manufacturers. This focus affords an unusual—and perhaps unique—opportunity to develop extensive, systematic data. It is also an especially interesting focus because: (a) indirect costs of litigation—operating through reactions of the industry's product safety regulator and automobile buyers—fueled by mass media attention figure prominently in case studies of product liability litigation in the automobile industry;[4] (b) economic effects are a fundamental concern in discussions about potential reform of the product liability system; and (c) economic effects of product liability in the automobile industry have received substantial attention in this regard (see, e.g., Huber & Litan 1991; Hunziker & Jones 1994).

Our analysis appears to be the first of its type. The only other systematic study of mass media reporting of tort litigation of which we are aware, by Bailis and MacCoun (1996), considers tort litigation generally and uses very different methods. Consequently, they are able to address some issues that we cannot but are unable to address many of the issues of direct concern here. More specifically, Bailis and MacCoun start by searching five national news and business news magazines from 1980 to 1990 for articles reporting on tort litigation. They then perform a content analysis of 118 such articles, focusing on the extent to which these accurately represent the world of tort litigation, as gauged by comparison with results of previous studies of systematic data. They conclude that a disproportionate share of magazine reporting focuses on: product liability and malpractice litigation; litigation resolved by trials; litigation where plaintiffs prevail; and relatively large damage awards. Of these kinds of issues, we address the latter two—and our results are consistent with those of Bailis and MacCoun.

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sequences for companies. Fisse and Braithwaite emphasize damage to corporate image, decreased prestige of senior managers, declines in employee morale, and distraction of key managers.

⁴ For example, (a) the Ford Pinto and Jeep CJ5 and CJ7 (Graham 1991); (b) the Audi 5000 (Sullivan 1990; Mackay 1991; Brown 1986; Huber 1991:ch. 4); and, more recently, (c) the GM C/K (sidesaddle) pickup trucks (LaManna 1993; Thomas 1993; Pearl & Lavin 1994).

In contrast, we focus on a particular type of litigation, start with a sample of cases and search for coverage of these cases in dozens of newspapers. This allows us to: (a) analyze a richer set of factors contributing to coverage; (b) study characteristics of cases that lead to more and less coverage while controlling for the effects of other factors; and (c) quantify effects.[5]

The next section explains how we developed a sample of verdicts. Section III explains how measures of newspaper coverage were developed and reports some basic patterns in the data. Among these patterns is evidence that there is almost no coverage of verdicts where defendant manufacturers prevail. The remainder of the article, then, focuses on determinants of the extent of coverage among verdicts where plaintiffs prevail. Section IV develops hypotheses about these determinants and defines variables constructed to examine them. Descriptive information about the sample is presented in Section V. Section VI details and interprets econometric estimates of the determinants of two dimensions of the extent of newspaper coverage: the probability that a particular verdict triggers an article in a particular newspaper and the expected length of an article given that one is published. Concluding comments are contained in Section VII.

I. Samples of Verdicts

We set out to develop a sample of personal injury, product liability verdicts involving automobile manufacturers and cars or light trucks.[6] We began by searching the *Automotive Litigation Reporter* (*ALR*) from January 1985 through July 1996.[7] The first stage of our analysis requires knowledge for all verdicts of the name of the plaintiff(s) and defendant manufacturer, and the date of the verdict. The search of the *ALR* yielded 259 such verdicts for which the defendant manufacturer was judged not to be

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[5] For example, the results of Bailis and MacCoun (1996) suggest that larger damage awards increase the likelihood of media coverage. Their approach, however, does not allow them to consider the extent to which the relatively high average award in their sample is due to factors that are correlated with large awards (e.g., especially severe injuries, a punitive component of damages) or to quantify, holding other factors constant, how the extent of coverage varies with the size of awards. These exemplify the questions our approach is designed to address.

[6] There seems to be no practical way of developing a complete listing or random sample of cases (for example, sampling courthouse records from around the country would be prohibitively costly).

[7] The *ALR*, published by Andrews Publications, Wayne, PA, is a litigation reporter specializing in automotive cases. (It also reports on regulatory events and automotive litigation other than product liability, such as lemon law cases.) It is sold by subscription, primarily to plaintiff and defense attorneys and law libraries. In 1994 the circulation was about 150. The cases covered in the *ALR* are an unsystematic sample of unknown completeness: Almost all articles in the *ALR* are based on reports from attorneys involved who take the initiative to send information to Andrews Publications (phone interview with Nick Sullivan, editor, October 1994).

liable ("defendant verdicts")[8] but only 67 in which the manufacturer was held liable for money damages ("plaintiff verdicts").[9] Three steps were taken to increase the number of plaintiff verdicts available for analysis: (a) writing and following up with phone calls to plaintiff attorneys listed in the *ALR* to request unreported verdict dates, which yielded another 13 verdicts;[10] (b) searching the index of *Jury Verdicts Weekly*, a reporter covering verdicts throughout California, which yielded 12 additional verdicts; and (c) searching a database developed from jury verdict reporters covering selected counties in five other states,[11] which yielded no additional observations.[12]

The final sample includes 259 defendant verdicts and 92 plaintiff verdicts. All but one of the plaintiff verdicts were rendered by a jury. Of the 92 plaintiff verdicts, 16 included a punitive award. The verdicts dates go back as far as 1983.[13]

II. Newspaper Coverage of Verdicts for Plaintiffs and Defendants

With this information in hand, we searched electronically through several full-text newspaper databases for articles "triggered" by these verdicts—that is, articles for which the verdict

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[8] In 17 of these 259 cases, money damages were assessed against a party other than the automobile manufacturer.

[9] If we were (naively) to use these figures to estimate the fraction of trials won by plaintiffs, the result of roughly 21% (67/326) would almost certainly understate plaintiff win rates in product-liability trials with automobile manufacturers as defendants. (That is, the set of cases reported in the *ALR* would not allow unbiased estimation of plaintiff win rates.) This is because we should expect a disproportionate number of defense victories to be reported in the *ALR* due to the nature of the readership and how the *ALR* editor learns of trial outcomes. In particular, victorious defense attorneys have more financial incentive to report to the *ALR* in the hope of attracting new clients than do victorious plaintiff attorneys because potential clients of defense attorneys (e.g., staff attorneys at automobile companies) are much more likely to see the *ALR* than are potential clients of plaintiff attorneys (e.g., people injured in automobile accidents). Some indication of the quantitative extent of the nonrandom reporting by the *ALR* (across plaintiff and defendant trial victories) can be developed from a recent study of product liability verdicts in six California counties from 1970 to 1990 (Daniels & Martin 1993). Specifically, Daniels and Martin report statistics implying a plaintiff win rate of 36.8% among 201 verdicts where injuries occurred in a vehicle and the suit involved companies classified in the transportation-equipment sector (derived from their Table 7, p. 83). Note, however, that the econometric work below focuses on cases where the plaintiff did win; hence the bias discussed here does not imply bias in our estimates.

[10] Letters were sent to attorneys involved in 15 cases.

[11] These are Illinois, Missouri, New York, Texas, and Washington (Moller 1996:5).

[12] Several verdicts in the database had previously been identified from the *ALR*. For the handful of relevant verdicts that had not been previously identified, we were unable to obtain all of the information required for the analysis.

[13] Some articles published in 1985 or later in the *ALR* reported post-trial events (e.g., appeals court rulings) for verdicts in 1983 and 1984, and these verdicts were included in the sample if they met the other criteria. Verdicts before 1983 were not included because (see below) almost no information about newspaper coverage could be developed for them.

was the reason or justification for the article.[14] The databases are the *Wall Street Journal*,[15] *New York Times* and the DIALOG PAPERS database group.[16] The DIALOG databases include 58 newspapers, but the time periods covered vary over newspapers. Broadly stated, more papers can be searched for later years.[17] For each verdict, we searched all newspapers that could be searched given the date of the verdict.[18] The searches were done using a keyword string of the form [(company name) or (division name) or (make name)] and [plaintiff(s) surname(s)][19] for the 15-day period centered on the verdict date.[20]

The most basic results of these searches are of substantial interest. In particular, we found an article in at least one newspaper (among those we could search given the date of the verdict) for: (a) only 9 of the 259 defendant verdicts;[21] (b) 38 of the 92

[14] This distinction is relevant for only a single case in the sample, but it is highly relevant for that one. This is the Moseley verdict in Fulton County, GA, in February 1993 that involved a GM C/K side-saddle pickup truck and an award of $101 million in punitive damages. (This verdict triggered the largest number of articles in our sample.) A few days after this verdict, GM sued NBC for a television news magazine (*NBC Dateline*) story involving the C/K pickup trucks. The GM-NBC suit triggered many more articles that also mentioned the Moseley verdict. These latter articles are not included in the analysis because they were not triggered by the verdict.

[15] Which includes articles for 1984 and later years.

[16] Knight-Ridder Information, Inc.

[17] For example, only 5 of the DIALOG newspapers can be searched back to 1983, 11 for 1986, 24 for 1988, 39 for 1989, 55 for 1990 and a high of 57 for 1994 and 1995. A few newspapers ceased publication during the analysis period.

[18] For example, for the 92 plaintiff verdicts an average of 40 newspapers could be searched, yielding the sample of 3,680 verdict-newspaper pairs used in the econometric analyses.

[19] Hypothetical search strings are: (a) (Chrysler or Plymouth) and Jones; (b) (General Motors or GM or Chevrolet) and Smith; and (c) (Ford or Mercury) and (Garcia or Thompson). This procedure was adopted after experimentation aimed at capturing virtually all relevant articles without also capturing excessive numbers of irrelevant ones (which are costly to collect, examine, and discard). Specifically, we experimented with search strings not containing the plaintiff's name but containing other keywords such as "liability" (which located several financial articles), "trial" (which located several reports on automobile road tests) and "verdicts" (which located various articles about trials not involving product liability). These strings located very large numbers of irrelevant articles but few relevant articles in addition to those located using the procedure we adopted.

[20] We searched earlier than the verdict date to investigate preverdict coverage of trials. It turned out, however, that preverdict newspaper coverage was too rare for our sample to support any quantitative analysis of the phenomenon. Only one of the 92 plaintiff victories had preverdict coverage in more than two newspapers (again, the Moseley case). Another trial triggered articles in two papers, and six other trials triggered exactly one preverdict article, all of which were in newspapers published in the metropolitan area where the trial was held.

[21] Because we found so few articles reporting defendant verdicts, we became concerned that we had missed several articles by including the plaintiffs' names in the search strings because articles about defendant verdicts might often not contain the plaintiff's name. To examine this possibility, we searched more intensively—without the plaintiff name—in newspapers published in the metropolitan area where the trial was held (which are the papers most likely to cover each verdict). Doing this for 12 defendant verdicts in 12 different states, we found no articles at all that we had missed using the original (less inclusive) search string. (Searching without the plaintiff's name for all verdicts and for all newspapers was not practical because it would yield tens of thousands of articles that would then have to be examined.)

plaintiff verdicts; and (c) 10 of the 16 plaintiff victories involving punitive awards. It is not surprising that newspaper coverage of plaintiff victories is considerably more prevalent than coverage of defendant victories, but the degree of the difference is striking.

Finding almost no defendant verdicts that triggered newspaper coverage, the analysis then focused on the question: Among the plaintiff verdicts, what determines the extent of newspaper coverage?[22]

III. Determinants of Coverage of Plaintiff Verdicts: Hypotheses and Measures

The goal is to understand why some verdicts for plaintiffs receive more newspaper coverage than others. To develop hypotheses and empirical measures, consider newspaper editors deciding what events to cover—that is, which potential stories warrant scarce space in their newspapers. From among those proposed by their staffs, editors are assumed to choose—constrained by the total amount of space available that day—the stories they believe would be of most interest to the readers of their particular papers.

Conceptual Guidance from Journalism Literature

Journalism textbooks and academic journal articles were reviewed to develop hypotheses about attributes of verdicts and newspapers that make particular verdicts of more interest to readers of particular newspapers.

There appears to be no theoretical or empirical literature focused on determinants of news coverage of product liability verdicts or civil verdicts of any type. Various textbooks and research studies, however, provide more general guidance, specifically by describing or exploring dimensions of what we call "news value."[23] Textbooks, for example, often pose and discuss in general terms the question: "What is news?"[24] Research studies tend to focus on particular types of events. As a consequence, journal articles were useful for our purposes primarily in suggesting that views of journalism researchers are broadly consistent with textbook discussions.

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[22] The analysis focuses on quantitative measures of coverage and does not involve "content analysis," namely, interpretation of the texts of the articles. Such interpretation would, of course, be a critical element in analyzing *how* newspaper coverage affects beliefs about the tort system and, in turn, behavior of claimants, companies, legislators, etc.

[23] It seems that there is no generally accepted term for this concept.

[24] Textbooks generally offer advice to student or novice reporters to help them recognize stories that their editors are more likely to view as deserving of space. Most such discussions state that there is no standard definition of news (or what we call news value). Some authors offer explicit definitions; many define news primarily or solely through examples.

There is broad agreement in the literature that news value depends on the nature or interests of the audience—in our context, readers of a particular paper. Virtually all discussions we reviewed are explicit about and agree on the importance of two attributes of a potential story that contribute greatly to news value: timeliness[25] and physical proximity (for example, a "local angle" to the story).

Some textbook discussions are especially helpful in suggesting other general attributes of events that contribute to news value because they discuss news value in abstract terms and explicitly identify attributes (Mencher 1986; Metz 1991; Friedlander & Lee 1996).[26] Among these, Metz (1991:3–7) is particularly helpful. In addition to timeliness and proximity, Metz includes under the heading "The Qualities of News": (a) "human interest" stories that "arouse an emotion in the reader, that evoke a visceral response" (Metz 1991:6);[27] (b) "prominence" of principals of the story; and (c) "consequence" for readers.[28]

Hypotheses about Determinants of Newspaper Coverage

Hypotheses—and related variables—were developed in terms of the following attributes of news value: proximity, human interest, prominence of principals, and consequence for readers.

The proximity concept suggests that a plaintiff verdict has more news value to a particular newspaper if the trial was located near where the paper's readers live. Consideration of aspects of human interest lead us to hypothesize that the extent of newspaper coverage will be greater: the larger is the amount of the award to the plaintiff as originally announced by (in all but one of our cases) the jury;[29] if punitive damages were assessed;[30] if the model of vehicle involved in the case had a history of being

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[25]   Which doesn't distinguish among our cases because, in principle, all of them could be covered in a timely fashion.

[26]   Other textbooks typically refer to attributes in addition to timeliness and proximity, although particulars, emphases and terminology differ.

[27]   Aspects that contribute to human interest include surprise, conflict, sympathy, pity, love, hate and anger (Metz 1991:6–7).

[28]   A recent research study refers to "traditional news values such as timeliness, significance, proximity, human interest, etc." (Abbott & Brassfield 1989:853).

[29]   Within the conceptual framework, a role for the size of damages can be motivated in several ways. It might be motivated in terms of surprise, for example, surprise that an "underdog" won money damages from a large company, with more surprise the larger the damages. This role might also reflect anger, for example, anger that the plaintiff was damaged so extensively by the product or anger at what is viewed as another excess of the tort system. Finally, a role for money damages might also be motivated in terms of a general description of human interest, for example, "stories about people and events that readers can identify with" (Metz 1991:7).

[30]   Anger at the company or the jury seems relevant here. Also, some discussions of news value identify "conflict" as contributing to human interest.

recalled for safety defects;[31] and if the injuries were particularly severe or dreadful. We also expect more coverage the more prominent is the defendant automobile manufacturer. A story can be of special consequence for readers who are potential buyers of the model involved in the case and for readers who have an unusual interest in automobile employment or in business news generally. Finally, other things equal, a story is more likely to be published the more space is available for news items at the time that the verdict is announced.

Dependent Variables

Table 1 presents variables used in the econometric analysis. The unit of observation is a verdict-newspaper pair, of which there are 3,680 in the sample.

The first dependent variable is binary, indicating (if ANYART = 1) that newspaper i ran at least one story triggered by verdict j within a week of the date that the verdict was announced. This variable equals one for 314 of the 3,680 sample observations, or about 8.5% of time. The other dependent variable, WORDS, is the total number of words published by newspaper i about verdict j within a week of the verdict, which is zero for all but 8.5% of the sample.[32] The average number of words for the 314 nonzero observations is 380. Probit and tobit models are used to analyze ANYART and WORDS, respectively.[33]

Independent Variables

Independent variables used in the basic econometric equations[34] are also presented in Table 1. The measure of geographic proximity, METRO, is binary, taking the value of 1 if the trial was

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[31] This might be interpreted in terms of anger at the company (for injuries associated with a vehicle with a poor safety record) or conflict between the company and the National Highway Traffic Safety Administration (NHTSA), the federal automobile product-safety regulator. Recalls do not, however, always involve conflict between the manufacturer and the NHTSA: It is not unusual for vehicles to be recalled by a manufacturer for safety-related reasons without any NHTSA activity (specifically, without the NHTSA opening a safety-defect investigation).

[32] We had hoped to analyze page-one articles as another outcome, but the data would not support such an analysis. Fewer than 2% of the 3,680 sample observations involve an article on page one of any section, and about half of the page-one articles involve the same verdict. Specifically, of the 368 articles located, 27 appeared on the first page of the first section (about 7% of all articles) and 57 appeared on the first page of an inside section (about 15%), but 22 and 21 of these page-one articles, respectively, were triggered by the Moseley verdict.

[33] These involve maximum-likelihood estimation of nonlinear extensions of multiple linear regression models that take into account the limited nature of the dependent variables. Specifically, ANYART takes on only two distinct values, and WORDS equals zero for about 91.5% of the sample observations, neither of which is compatible with linear regression analysis of these outcomes. Both models assume an underlying error term that is normally distributed.

[34] Other independent variables are used to analyze sensitivity of the conclusions to changes in specification; see below.

Table 1. Variable Names and Definitions

Variable	Definition
Dependent variables:	
ANYART (i,j)	= 1 if newspaper i covered verdict j within 7 days
WORDS (i,j)	Number of words published by newspaper i about verdict j
Independent variables:	
METRO (i,j)	= 1 if trial and newspaper in same CMSA
LNTOT$ (j)	Log real total dollar damages (compensatory plus punitive)
ML$VDT (j)	1 = if nominal total damages > $1 million
LCLTOT (i,j)	METRO * LNTOT$
COLIAB (j)	= 1 if another party liable for part of award
PUNID (j)	= 1 if part of award for punitive damages
RLTRCL (j)	= 1 if model had been recalled for reason related to defect alleged in trial
ONERCL (j)	= 1 if model had been recalled once (for any reason) prior to verdict date
TWORCL (j)	= 1 if model recalled twice
THRRCL (j)	= 1 if model recalled three times
MNYRCL (j)	= 1 if model recalled more than three times
FATAL (j)	= 1 if someone was killed in accident
BURN (j)	= 1 if someone was burned in accident
PARAL (j)	= 1 if someone was paralyzed as a result of accident
LNFMSZ (j)	Log company sales during year prior to verdict
VSMLMD (j)	= 1 if (0 < Model Sales < 30K) ("very small model")
SMLMDL (j)	= 1 if (30K < Model Sales < 80K) ("small")
MEDMD (j)	= 1 if (80K < Model Sales < 125K) ("medium")
LRGMDL (j)	= 1 if (125K < Model Sales < 300K) ("large")
VLRGMD (j)	= 1 if (Model Sales > 300K) ("very large")
MICH (i)	= 1 for newspaper in Michigan (*Detroit Free Press*)
OHIO (i)	= 1 for (five) newspapers in Ohio
LNBUS (i)	Log of average number of business articles published per day
LNARTS (i)	Log of average number of articles published per day
WSJ	= 1 for *Wall Street Journal*
JAN. . .NOV	= 1 for month of verdict

NOTE: (a) Newspapers indexed by i, verdicts indexed by j. (b) Categorical variables are zero otherwise.

located in the same metropolitan area[35] as the paper is published in (and zero otherwise). Two variables, used in combination, operationalize different aspects of the size of the total damage—compensatory plus punitive—award:[36] (a) the natural logarithm[37] of the real dollar amount of the total damage award (expressed in 1995 dollars), LNTOT$,[38] and (b) ML$VDT, which indicates whether the nominal amount of the total damage

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[35]   Specifically, metropolitan areas are sets of contiguous counties considered by the U.S. Census Bureau to be metropolitan in nature. The Census defines three types of metropolitan areas; all of the areas relevant to our sample are Consolidated Metropolitan Statistical Areas (CMSAs).

[36]   In some of our cases the defendant is not liable for the entire amount of the damage award. See the discussion and sensitivity analysis below.

[37]   Use of logarithms for various variables is discussed below.

[38]   We emphasize that the damages are the amounts initially determined by the jury, before, for example, they are reduced or overturned by the trial judge or an appeals court or changed through settlement. Nominal values were adjusted using the Consumer Price Index for all items for urban consumers (CPI-U), taken from the *Economic Report of the President*, Feb. 1997, Table B-58.

award was at least one million dollars.[39] An interaction of the proximity and damage amount (LCLTOT) was also included because these two factors were expected to be the primary determinants of newspaper coverage, and an especially substantial interaction seemed very plausible.[40] The variable COLIAB indicates whether the defendant manufacturer is, in fact, liable for less than the total damage amount, which may affect how editors and readers interpret the total damage assessment in the case.[41]

The existence of a punitive component of the award is indicated by PUNID = 1, which is the case for 16 of the 92 verdicts. Including this variable in combination with total damage amounts, which include the amount of the punitive award if any, allows for an independent effect—holding dollar amount constant—of the jury concluding that the defendant deserves to be punished.[42]

The next five independent variables pertain to two different aspects of the recall history of the vehicle model involved in the trial. The first (RLTRCL), equals one if prior to the date of the verdict the vehicle involved in the trial—defined by model and model year—had ever been recalled for a safety problem similar or related to any safety defect alleged in the trial.[43] The next four variables listed in the table control for the number of times the vehicle involved in the trial had been recalled prior to the verdict date for any safety-related reason, regardless of whether the recalls were related to a defect alleged in the trial.[44]

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[39] "Million dollar verdicts" often attract attention and might also be more likely to generate news stories because (for example) the word "million" can appear in the headline or story. (About 62% of the headlines in the sample articles indicate the size of the award.) Nominal values are used here because newspapers would report damages in nominal (that is, current-dollar) terms.

[40] Some degree of interaction among all pairs of variables is inherent in the probit and tobit models (because of the nonlinearity of the normal cumulative distribution function). Introducing explicit interaction variables allows for more (or less) interaction than inherent in the underlying econometric model.

[41] The manufacturer was held liable for less than 100% of the total award (and COLIAB = 1) in 18 of the 92 cases. In 11 of these 18 cases the plaintiff was assigned part of the liability. Punitive damages were assessed in none of these 11 cases and (only) one of the other seven, and in that case the manufacturer was found liable for 97.5% of the total damages.

[42] Thus, e.g., indicating additional conflict or anger.

[43] The vehicle components alleged to be defective in the trial and the alleged cause of the accident or injury were coded from the litigation reporters. Recall histories were obtained in electronic form from the NHTSA. These histories include all recalls, whether or not they involved prior NHTSA investigation. Using these histories, we determined the vehicle components involved in the recalls and the descriptions of how the components were believed to fail (and thereby pose a hazard). Coding RLTRCL was based on comparing the information from the trial and recall histories and required judgment. RLTRCL was coded as 1 if there was any indication that there had been a recall for reasons related to the allegations at the trial. In the 14 cases where we did not know the model year of the vehicle, we searched over model years for seemingly related recalls. When we didn't know the model of the vehicle—as occurred only, but often, with trucks, we searched over all truck models fitting whatever description we had (e.g., "pickup truck" or "van").

[44] The omitted category is no recalls. Again, this variable is defined for the model and model year of the vehicle involved in the trial. When the model year was unknown,

The nature of the injuries involved in the trial is represented by three dichotomous variables indicating particularly serious or dreaded injuries: fatalities, serious burns, and paralysis. These variables are defined in terms of whether anyone in the accident involved in the trial suffered any injuries of these types.[45] The prominence of the defendant is represented by LNFMSZ, the logarithm of the number of cars and light trucks sold in the United States by the company during the calendar year prior to the verdict.[46]

Three dimensions of consequence for readers are considered. First, the verdict and the alleged defect could be of interest to readers who might consider buying a vehicle of the model involved in the trial. The prevalence of such readers is assumed proportional to the number of vehicles of that model that the company sold in the United States during the calendar year prior to the verdict.[47] These sales figures were divided into the categories detailed in the table to take advantage of relatively large gaps in the distribution and to obtain groups of roughly equal size.[48] LRGMDL (for "large model"), for example, takes the value 1 (and zero otherwise) for models with sales between 125,000 and 300,000 units in the United States the previous year.

Second, readers in areas with relatively high levels of employment in automobile manufacturing might also be particularly interested in stories about the sample verdicts. The variables MICH and OHIO were constructed to take this into account. Specifically, we computed for each newspaper the fraction of 1990 population in the state[49] where the paper is published[50] that was in

we considered all model years, counted all recalls prior to the verdict and averaged over all relevant model years. When we didn't know the model of a truck, we considered all models, counted recalls for the model year involved in the trial and averaged over models.

[45]   This information was coded from the litigation reporters.

[46]   Vehicle sales data were obtained from various issues of the annual *Market Data Book* published by Automotive News.

[47]   The prior year was used to avoid any potential effect of newspaper coverage of the verdict on the subsequent sales of the model.

[48]   The number of verdicts (of 92) that fall into the categories in the table are (in order of increasing sales levels) 17, 17, 15, 13, and 6. The remaining 24 cases—the omitted category in the regressions—involve models with no sales at all the previous year, namely, models that had been discontinued.

[49]   For papers published in metropolitan areas including counties in more than one state, we averaged state-level employment fractions in proportion to the populations of the metropolitan area from each relevant state. Initially, we attempted to construct this variable using employment data specific to the metropolitan area where the paper was published using unpublished data from the U.S. Department of Labor, Bureau of Labor Statistics (BLS). Doing so turned out to be infeasible, however, because most of the relevant data could not be released by the BLS without disclosing confidential (plant-level employment) data.

[50]   National figures were used for the three national newspapers in the sample: *Wall Street Journal, USA Today,* and *Christian Science Monitor.*

automobile manufacturing in 1990.[51] These data fell into three distinct groups: Michigan (where the employment fraction is about .03) and OHIO (where the fraction is about .01) and everywhere else, where the fraction is far below .01. Because our only sample newspaper in Michigan is the *Detroit Free Press*, the variable MICH is also interpreted as a paper-specific fixed effect. There are five Ohio newspapers in our sample.[52]

Third, readers who are particularly interested in business news might also be particularly interested in stories about product liability verdicts. To control for this, we constructed the variable LNBUS, which is the logarithm of the number of articles that a newspaper devotes to business news on an average day. This variable is based on article counts by subject heading obtained from the DIALOG and *New York Times* databases.[53] Because the subject headings used differ by newspaper, construction of this variable involved judgment, and we view it as somewhat crude.[54]

The likelihood that a story will be covered in a newspaper also depends on the total amount of space available when the story would be timely. Here we take account of two separate factors: (a) LNARTS controls for the average number of articles (of any type) published in each paper per day;[55] and (b) the month in which the verdict was announced, represented by 11 indicator variables (December is omitted), because the amount of space available for news articles depends on the amount of advertising sold, which is seasonal.[56] It would also be desirable to control for news values of other events competing for space when reports about a verdict would be timely.[57] It seems infeasible, however, to construct measures of these determinants.

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[51] Data on automobile manufacturing employment by state are from *Motor Vehicle Facts and Figures*, '91, Motor Vehicle Manufacturers Association of the U.S., p. 63. The year 1990 was chosen because it is in the middle of our sample period; the employment figures do not change enough over time to affect the values of our variables.

[52] *Cleveland Plain Dealer, Columbus Dispatch, Akron Beacon Journal, Cincinnati/Kentucky Post,* and *Dayton Daily News.*

[53] This variable is coded as $\ln(.0001) = -9.2103$ (equivalent to essentially zero articles per day) for the *Wall Street Journal;* see below.

[54] We defined relevant articles to include those categorized as Business, Finance, or Marketing (which was very rare); and to exclude Economy, Real Estate, Taxes, Investments, Financial Planner, Family Business, Personal Business, Money, Consumer, Employment, and Cars/Autos. We did not break this variable into categories because there were no substantial gaps in its distribution below 20 articles per day and only five sample newspapers had a value of more than 20.

[55] Like LNBUS, LNARTS is coded as $\ln(.0001)$ for the *Wall Street Journal.*

[56] The point is that when more advertising is sold, the threshold for publication of a news article is lower because newspapers want advertising to be interspersed with news articles (e.g., because the news content is what induces many readers to turn pages and see ads). In the extreme, the threshold can be very low during December when advertising quantities are particularly high.

[57] Such control would be valuable because we would expect substantial improvement in the fit of the equations and the precision with which the other coefficients are estimated. It seems very unlikely that our estimates are biased by failure to control for the

Finally, the variable WSJ is included because both the LNBUS and LNARTS variables are coded artificially[58] for the *Wall Street Journal*. In the case of LNBUS, the subject headings available for that paper do not allow distinguishing subject matter along the lines involved in the definition of LNBUS. Moreover, the definition of LNARTS if implemented for the *Wall Street Journal* would mean something quite different from the other papers because a disproportionate share of articles in that newspaper are written from a business perspective.

Use of Logarithms

Appropriately specifying the functional form for a regression is always challenging. As reported, we often chose to specify variables in terms of categories, thus allowing for some flexibility across categories. In four cases this was impractical, because there was no sensible basis for defining a relatively small number of categories: dollar amounts of awards, company sales levels, numbers of business articles per day and numbers of articles per day. In these cases we employed logarithmic transformations. This was done to avoid—as would be true without the logarithmic transformation and seems very implausible—forcing the estimates to imply marginal impact of a unit increase in one of these variables (dollars, vehicles, or articles per day) on the probability of an article the larger is the value of the variable.[59] For example, the marginal effect of another million dollars in damages would seem to be higher starting at a base of (say) $3 million than starting at a base of (say) $20 million. Because the logarithmic function gets flatter and flatter as its argument increases, this transformation counters the tendency for marginal effects to increase.

IV. Sample Characteristics

Before presenting econometric estimates, we describe some features of the sample. While the verdicts themselves are spread somewhat evenly over the 14 years, this is not true of the punitive

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factor because there is no reason to expect the importance of concurrent events to be correlated with the factors we do measure.

    58   Specifically, as ln(.0001).

    59   More specifically, in the probit model the marginal effect of an increase in an independent variable on the probability of response (in our case, the probability of an article) is its (regression) coefficient—which is a constant—multiplied by the density of a standard normal random variable at the probability predicted by the probit equation. In the neighborhood of the mean of y = ANYART, namely, .085, this density is increasing quite rapidly and thus the marginal impact of a given increase in an independent variable would be forced to increase. This does not seem plausible for dollar amounts, sales levels, or numbers of articles; hence, the use of logarithms.

awards.[60] In particular, 7 of the 16 punitive awards in the sample occurred in 1995 and 1996, the last two years with any observations. Thus, for example, results about the effects of a punitive component are heavily influenced by relatively recent events.

Table 2 reports the distribution of the verdicts—and those with punitive damages—across defendant manufacturers. Cases involving GM account for 40% of the sample verdicts, which may seem surprising. It is noted, however, that GM also accounted for just about 40% of passenger cars sold in the United States between 1978 and 1991.[61] Five other companies contribute more than 200 observations each, and 11 other companies are represented in the sample.

Table 2. Distribution of Plaintiff Verdicts and Sample Observations by Defendant

Defendant Company	Verdicts[a] (of 92)	Punitive Verdicts[b] (of 16)	Sample Observations (of 3,680)
General Motors	37	5	1,523
Ford	12	3	538
Toyota	9	1	433
Volkswagen	9	1	286
Chrysler	5	3	225
American Motors	4	1	58
Hyundai	4	0	231
Porsche	2	1	60
Subaru	2	0	73

[a] The sample also contains one case each for Izusu, Jaguar, Mazda, Fiat, Mercedes, Suzuki, Volvo, and Nissan.
[b] Suzuki was the defendant in the other case with punitive damages.

Table 3 summarizes the size distributions of real compensatory, punitive and total damage awards. While compensatory damages are less than $4 million for more than half of the 92 verdicts, there are several quite large values for compensatory damages (for example, 16 exceeding $10 million and 3 exceeding $30 million). Moreover, while three-quarters of the punitive awards exceed $10 million, and one-quarter exceed $50 million, there are some relatively small punitive awards as well (for example, 3 less than $1 million, 2 of which are less than $100 thousand). The fact that large total damage awards do not go hand in hand with the existence of a punitive component suggests that there is sufficient sample information to estimate separate effects of these two factors.

[60] An earlier version of this article, available from the authors, details the composition of the sample verdicts and those involving punitive damages by the year of the verdict (Garber & Bower 1998:Table 3).

[61] Derived from data in various annual issues (between 1978 and 1991) of *Motor Vehicle Facts and Figures,* Motor Vehicle Manufacturers Association of the U.S. The distribution of verdicts across companies, of course, also reflects several factors other than numbers of vehicles on the road, such as the prevalence of suits against different manufacturers, their propensity to settle such suits, their success rates at trial and the vagaries of reporting of verdicts to the *ALR.*

Table 3. Counts of Verdicts by Real Damages Amounts

Dollar Range	Compensatory Damages	Punitive Damages	Total Damages
< 100K	5	2	3
100K–1M	12	1	11
1M–2M	15	0	15
2M–3M	10	0	9
3M–4M	8	0	8
4M–5M	9	1	8
5M–10M	17	0	16
10M–15M	7	4	7
15M–20M	3	1	4
20M–30M	3	2	3
30M–50M	3	1	2
50M–100M	0	3	4
100M–150M	0	1	2
Total	92	16	92

NOTE: Amounts are constant 1995 dollars; K = thousand, M = million; values on border of category assigned to higher category.

V. Econometric Estimates and Implications

This section reports and interprets the econometric estimates. We first review estimates in terms of directions of effects and statistical significance. Then we interpret the sizes of the estimated effects, which are somewhat complicated for the probit and tobit models. The section closes with an examination of the robustness of the key conclusions to three changes in specification.

Probit and Tobit Coefficients

Columns (1) and (2) of Table 4 report estimated coefficients and *t*-ratios (in parentheses) for the basic specifications for ANY-ART and WORDS, respectively. Columns (3) and (4) present estimates for a variant of the specification motivated by the major anomalous result for the basic specification. The estimates in columns (1) and (2) are discussed first.

The quantitative interpretations of probit and tobit coefficients are not as straightforward as those for linear regression. Thus, the estimates in Table 4 are first reviewed with respect to the signs of estimated coefficients (which indicate directions of effects), the relative magnitudes of coefficients of selected independent variables, and statistical significance. The quantitative implications of the estimates are considered subsequently. Consider first columns (1) and (2), which (not surprisingly) suggest very similar qualitative conclusions about the determinants of whether there is any coverage and the number of words published, respectively.

The first row of estimates pertains to the estimated effects of LNTOT\$, the logarithm of the real dollar amount of the total damage award. The positive coefficients in columns (1) and (2),

Table 4. Probit and Tobit Estimates of Determinants of Newspaper Coverage (*t*–Ratios in Parentheses)

Independent Variables	y=ANYART (Probit) Basic Specification (1)		y=WORDS (Tobit) Basic Specification (2)		y=ANYART (Probit) Company Dummies (3)		y=WORDS (Tobit) Company Dummies (4)	
LNTOT$	.232	(3.65)	119	(3.61)	.241	(3.16)	107	(2.78)
ML$VDT	.509	(1.90)	236	(1.67)	.794	(2.39)	401	(2.33)
METRO	−2.38	(−1.01)	−702	(−0.78)	−3.59	(−1.41)	−1,047	(−1.14)
LCLTOT	.254	(1.65)	104	(1.82)	.341	(2.04)	128	(2.19)
COLIAB	.0567	(0.37)	−28.9	(−0.37)	.368	(2.04)	133	(1.45)
PUNID	.762	(5.01)	364	(4.51)	.705	(4.00)	351	(3.89)
RLTRCL	.560	(3.47)	415	(5.01)	.376	(2.19)	325	(3.76)
ONERCL	−.821	(−4.11)	−467	(−4.40)	−1.21	(−4.84)	−638	(−4.94)
TWORCL	.109	(0.61)	106	(1.15)	−.120	(−0.56)	−15.3	(−0.14)
THRRCL	.0812	(0.40)	53.3	(0.50)	−.304	(−1.43)	−152	(−1.43)
MNYRCL	−.433	(−1.78)	−230	(−1.83)	−.287	(−1.21)	−165	(−1.34)
FATAL	.527	(2.91)	319	(3.39)	.400	(2.31)	251	(2.86)
BURN	−.252	(−1.12)	−90.7	(−0.79)	−.0189	(−0.08)	38.0	(0.32)
PARAL	−.103	(−0.72)	1.20	(0.02)	−.293	(−1.86)	−89.8	(−1.13)
LNFMSZ	−.204	(−4.02)	−99.3	(−3.72)	co. dummies		co dummies	
VSMLMD	−.112	(−0.53)	−63.7	(−0.59)	.0411	(0.17)	5.89	(0.05)
SMLMDL	.884	(4.08)	460	(4.75)	1.38	(6.45)	682	(6.21)
MEDMD	.0605	(0.26)	25.4	(0.21)	.315	(1.17)	154	(1.14)
LRGMDL	1.61	(8.87)	881	(9.14)	2.02	(9.26)	1,058	(9.48)
VLRGMD	.230	(0.81)	272	(1.88)	.553	(1.79)	358	(2.34)
MICH	−.0497	(−0.21)	−51.5	(−0.43)	−.0627	(−0.26)	−53	(−0.46)
OHIO	−.209	(−1.23)	−101	(−1.20)	−.212	(−1.23)	−104	(−1.24)
LNBUS	.0751	(1.27)	54.8	(1.64)	.0768	(1.29)	54.7	(1.65)
LNARTS	.540	(4.32)	265	(4.05)	.532	(4.18)	257	(3.95)
Sigma[a]	1.00		533		1.00		524	

[a] Standard deviation of regression disturbance (normalized in probit model).

which are highly statistically significant, indicate that, other things equal, higher damage amounts tend to increase both the probabilities of coverage and the lengths of articles. The positive, and somewhat less significant, coefficients of ML$VDT indicate that if damages exceed $1 million in nominal terms the extent of coverage is greater, even controlling for total dollar amount.[62]

The coefficients of the next two variables, METRO and LCLTOT (which is the product of METRO and LNTOT$) must be interpreted jointly. These variables both equal zero unless the trial was held in the metropolitan area in which the newspaper is published, in which case both METRO and LCLTOT are positive. The marginal effect of a verdict being local is the coefficient of METRO plus the coefficient of LCLTOT multiplied by the value of LNTOT$. For the estimates in column (1), this effect is positive as long as total damages exceed (roughly) $11,750—

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[62]   Thus, there is, as hypothesized, a discontinuous effect of crossing the $1 million threshold.

which is true for virtually all of the observations[63] and the marginal impact grows with the size of LNTOT$.[64]

The coefficients of LCLTOT refine the interpretation of the effect of the damage amount, specifically by augmenting the marginal impact of larger awards if the story is local. The coefficients of this variable (.254 and 104 in columns (1) and (2), respectively) indicate that the marginal effects of larger damage awards are larger for local verdicts.

The next variable that appears to play an important role[65] is PUNID. The estimated coefficients of this variable in the equations for ANYART and WORDS indicate that the extent of newspaper coverage is greater when part of the damage award is punitive. Moreover, the estimated effects, which are highly statistically significant, also appear to be quite large. For example, they are about half again as large as the corresponding coefficients of ML$VDT.

The performance of the recall history variables is mixed. The estimates for RLTRCL indicate that newspaper coverage is more prevalent, other things equal, if the vehicle had been recalled for a defect related to a defect alleged in the trial. In fact, these estimates are quite large and highly statistically significant. The next four independent variables reflect the general recall history of the vehicle by controlling for the number of times the vehicle involved in the trial was recalled for any reason. The estimates here are puzzling. The signs of the coefficients and their pattern over numbers of recalls are counterintuitive.[66] Their implausibility suggests that their substantive implications not be taken seriously.

The independent variables controlling for the nature of injuries suggest a plausible, and perhaps surprising, conclusion. In particular, they suggest that coverage is more likely and more words are written if the accident leading to the trial involved at least one fatality, but that burns and paralysis do not affect the extent of coverage.

Perhaps the most surprising estimate of all—and the motivation for the estimates in columns (3) and (4)—are those for LNFMSZ, the variable controlling for the size of the defendant

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[63] Two of the 92 verdicts involved real damages of roughly $7,500 and $12,100; the next lowest is just under $100,000.

[64] The relevant derivative is $-2.38 + .254*\text{LNTOT\$}$, which is positive if $\text{LNTOT\$} > 9.37$, which corresponds to damages of $11,732 equals ($e^{9.37}$). Analogously, according to the estimates in col. (2), the marginal impact of a local story is positive for WORDS as long as damages are about $37,350 or higher.

[65] COLIAB appears to have no independent effect in the basic specification, with relatively small and statistically insignificant coefficients.

[66] The coefficients of TWORCL and THRRCL suggest that these groups are indistinguishable from the omitted group (no recalls), which is not implausible. Taken at face value, however, the negative and significant coefficients of the variables indicating one recall and many recalls (namely, more than three) suggest that newspaper coverage is less likely under these conditions than for no recalls at all.

company. This variable was included on the hypothesis that larger companies are more prominent (and thus well known to readers) and hence verdicts against them would tend to attract more news coverage. The negative and statistically significant estimated coefficients of LNFMSZ, however, suggest just the opposite.

The next five variables control for the recent sales of the model of vehicle involved in the trial on the theory that safety information about more popular models would be of consequence to more readers. The estimates provide some, albeit inconsistent, support for this notion. In particular, since the omitted group pertains to models that have been discontinued (and thus have no sales in the previous calendar year), we would expect that coefficients of the five variables to be positive, which they are in four of five cases for both ANYART and WORDS. However, moving down the columns, we would also expect the coefficients to increase for models with increasingly large sales levels, and this is not nearly true of the estimates.

The next two variables—MICH and OHIO—also do not perform as expected. They were included to capture a different dimension of consequence for readers, namely the importance of automobile employment in the geographic area where the paper is published. While positive coefficients were expected, the coefficients are, in fact, negative (albeit not statistically significant). The variable introduced to control for the interest of readers in business news generally, LNBUS, has positive coefficients, but relatively small t-ratios, providing at best weak support for the prediction that papers with more business news coverage would be more likely to cover product liability verdicts against automobile manufacturers.

Finally, the variables used to control for space available in the paper performed as expected. The LNARTS, variable, for example, indicates that the extent of coverage of verdicts is greater in papers that publish more articles per day. The coefficients of the monthly dummy variables—which are not reported to conserve space—indicate that coverage is most likely in December, when (presumably) the high volume of holiday-related ads provides an unusual amount of space for running news items.[67]

Before considering the quantitative implications of these estimates, consider columns (3) and (4). These estimates change the specification only in the way that the defendant company is represented. The purpose is to see if the implications of the estimates in columns (1) and (2)—the estimates for the "basic specification"—are sensitive to the major anomaly in those columns: the negative, statistically significant estimates of the coefficients

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[67] The month of December was omitted, and the coefficients of the 11 variables indicating the month of the verdict were all negative for both ANYART and WORDS and were statistically significant in all but two and three cases, respectively.

of LNFMSZ (which suggest that verdicts against smaller companies receive more news coverage other things equal). The modified specification omits LNFMSZ and replaces it with dummy variables for the four American companies (GM, Ford, Chrysler, and American Motors) and the two foreign companies with the largest numbers of sample observations: Toyota and Volkswagen.[68] Comparing column (1) with column (3) and column (2) with column (4) indicates that freeing up how the specification controls for the identity of the defendant company does not alter any of the basic conclusions.[69]

Quantitative Significance of Key Dichotomous Variables

The quantitative interpretations of probit and tobit coefficients are not entirely straightforward for two reasons: (a) they are not scaled in the same units as the outcome variables (probabilities or words); and (b) because the models are non-linear and interactive, the marginal effects of any given change in an independent variable differ as the values of the other independent variables change. The next two subsections provide estimates for the basic specification that illuminate the quantitative significance of the estimates reported in columns (1) and (2) of Table 4. This subsection focuses on the effects of various dichotomous variables that appear to play important roles in determining the extent of newspaper coverage. The next subsection provides information about the effects of changes in damage amounts.

Table 5 reports results of several calculations involving predicted effects of a local trial, the existence of a punitive component of the award, a prior recall related to the allegations in the trial, and fatalities. We focus on these dichotomous variables because they are all estimated to have sensible, substantial and statistically significant effects.[70]

The table reports predicted probabilities and expected article lengths in columns (1) and (2) respectively, varying the values of the four dichotomous variables and holding other vari-

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[68] The omitted group is a combination of the other companies listed in Table 2. With the exception of Hyundai—not a particularly prominent automobile company—which contributes 231 sample observations, all of the omitted companies contribute fewer than 75 observations (less than 2%) to the sample. The most prominent omitted company is Nissan, but it contributes only 13 sample observations.

[69] The estimated coefficients of the company dummies are not reported to conserve space. They indicate that GM and Toyota are less likely to receive coverage (with probit coefficients of about −.9) as is Chrysler (to a lesser extent, with a probit coefficient of roughly −.6). These negative effects are statistically significant. The estimated coefficient for Volkswagen is positive (roughly .8) and significant. The other two coefficients are small and statistically insignificant.

[70] The other dichotomous variable that fits this description is ML$VDT. Its role cannot be interpreted along the lines of Table 5, because it is not sensible to vary ML$VDT while holding the size of damages constant as is done for the other dichotomous variables.

Table 5. Individual and Joint Effects of key Dichotomous Variables on probablilties and Lengths of Articles (Other *X*s at Means)

Assumed Values of Independent Variables	Probability of an Article in a Particular Paper (1)	Expected No. of Words if an Article Is Published (2)
All variables at means	.005	186
Changing one factor at a time:		
Effect of local trial:		
METRO = 0	.005	185
METRO = 1	.132	328
Effect of punitive component:		
PUNID = 0	.003	187
PUNID = 1	.024	221
Effect of related recall:		
RLTRCL = 0	.003	176
RLTRCL = 1	.015	223
Effect of fatality:		
FATAL = 0	.003	178
FATAL = 1	.014	213
Varying combinations of factors:		
None of 4 = 1	.001	161
All 4 = 1	.615	675
All but METRO = 1	.115	316

ables constant at their sample mean values. The predicted probabilities are indicative of the likelihood that a newspaper chosen at random would publish any article about a verdict with a specified set of characteristics. The predicted number of words is conditional on the assumption that an article is published.[71] In combination, these two quantities provide information about different aspects of the extent of newspaper coverage.

The first row provides a baseline for comparison by reporting predictions assigning all independent variables to their sample means. As can be seen from the table: (a) for verdict-newspaper pairs with the mean characteristics, the likelihood of an article is very small, about one-half of 1%; and (b) if an article were nonetheless published under these circumstances, it would be expected to contain 186 words. How do these predictions change as we vary the values of the four dichotomous variables?

First consider the effect of a trial taking place in the metropolitan area where the paper is published. First assume that METRO equals zero—which implies that LCLTOT is also zero—and other independent variables are at their means. In this case, the probability of an article and the length of an article are predicted to be roughly the same as when all independent variables are at their means.[72] If, however, the verdict is a local story, the

[71] These are calculated using the tobit estimates and mathematical properties of truncated normal distributions; see, e.g., Greene 1997:949–63.

[72] This reflects the fact that the coefficients of METRO and LCLTOT are of opposite signs and just about cancel each other when LNTOT$ is at its sample mean.

probability of an article jumps up to a bit more than .13 and the predicted length of the story increases by about 75% (from 185 to 328 words).

The existence of a punitive component of the award increases the predicted probability of an article from .003 to .024 and increases the expected length of an article (assuming one is published) by only 34 words. The corresponding predictions for the existence of a related recall and a fatality are similar.

The interactive nature of the models is well illustrated by considering—as in the bottom panel of the table—the effects of changing characteristics jointly. If, for example, a story is not local and doesn't involve punitive damages, or a related recall, or a fatality, then—assuming all other variables are at their means—the predicted chance of an article is a minuscule .001 (one in one thousand). In contrast, if all of the four factors are present—the case is local and involves punitive damages, a related recall, and a fatality—the probability of an article is more than 60%, and if an article is published it is predicted to be 675 words long. The last row indicates that the local element is very important: Even if the three other factors are present, if the story isn't local the probability of an article is only 11.5% (compared with 61.5%) and the expected length of an article is less than half that predicted if the story is also local (316 versus 675 words).

One key factor affecting these outcomes is not varied in Table 5: the dollar size of damages. Because this variable is continuous, the effects of varying dollar amounts is best illustrated graphically for many alternative values. As we will see, when the dollar amount is above its sample mean,[73] the effects of the dichotomous variables can be much larger than is suggested by Table 5.

Quantitative Significance of Damage Amounts

Figure 1 plots the probabilities of an article being published by a randomly chosen newspaper against the magnitude of dollar damages as initially assessed by (in all but one case) the jury. In constructing the figure, other independent variables are set equal to their sample mean values, except ML$VDT, which is set equal to one (which is true for virtually the entire horizontal scale).

Two curves are plotted in Figure 1 to illustrate (along with the effects of increasing dollar amounts) how the effects of a dichotomous variable depend on the size of damages, and vice versa. We focus on the existence of punitive damages because it is of primary substantive interest. Specifically, the lower curve plots the probability of newspaper coverage as a function of total

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[73]   In the table, the mean of LNTOT$ is assumed, which corresponds to damages of a bit over $4 million (in real 1995 terms).
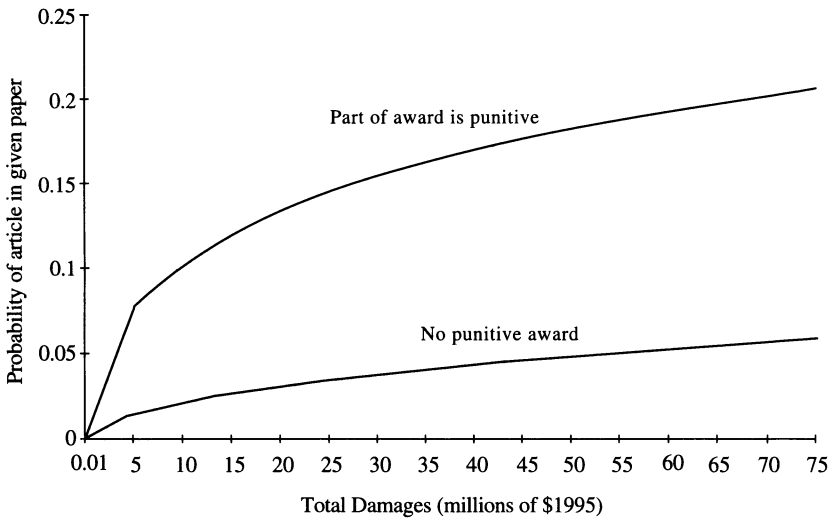
Fig. 1. Larger damages increase coverage, especially if there is a punitive component.

damages assuming there is no punitive award. Because the largest (real) total award without a punitive component is roughly $46 million, some of the horizontal scale for this curve represents projection beyond the sample range of verdicts without punitive awards.[74] The higher curve plots the probability of newspaper coverage as a function of total damages assuming there is a punitive award.[75]

As implied by the positive coefficient of LNTOT$ reported in column (1) of Table 4, each curve is upward sloping, which indicates that newspaper coverage is more probable the larger are the total damages involved. Reflecting the positive coefficient of PUNID reported in column (1) of Table 4, the curve assuming the existence of punitive damages lies above the other curve.

How sensitive are these probabilities to the size of the damage award? Consider, for example, an increase in total award from $5 million (a bit above the sample mean) to $45 million (a bit below the largest award not including punitive damages). If there is no punitive component, this very large increase in damages increases the probability of an article from about .015 to .045 (only .03 on the probability scale). If, however, parts of both hypothetical awards are punitive, this hypothetical increase in damages increases the probability of an article from about .075 to .180, an increase of more than .10 on the probability scale.

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[74] The next highest amount is $30 million; seven others are between $10 million and $25 million.

[75] The largest level of real total damages for verdicts with a punitive component is about $145 million.

Now suppose that the $5 million award is entirely compensatory and some or all of the additional $40 million is punitive. Under these circumstances, according to the estimates the effect of the $40 million increase in damages is to increase the probability from .015, the predicted value for $5 million without a punitive component, to .180, (the predicted value for $45 million with a punitive component).

In sum, the estimates indicate that a punitive award tends to increase newspaper coverage both because of the consequent increase in total damages and because of the punitive nature of the verdict. Moreover, the punitive nature of an award appears to have a more powerful effect on newspaper coverage than the additional dollar amount of even an unusually large punitive award.

We have seen that the probability of an article in a particular newspaper is very sensitive to whether the trial is a local story. Figure 2 decomposes the two curves in Figure 1 to examine this factor along with the effects of varying dollar amounts. As can be seen in Figure 2, the probability of an article is much more sensitive to the size of damages if the story is local. For example, a $45 million verdict has roughly a 65% chance of coverage if the story is local and there are no punitive damages and almost 90% if there is a punitive component.
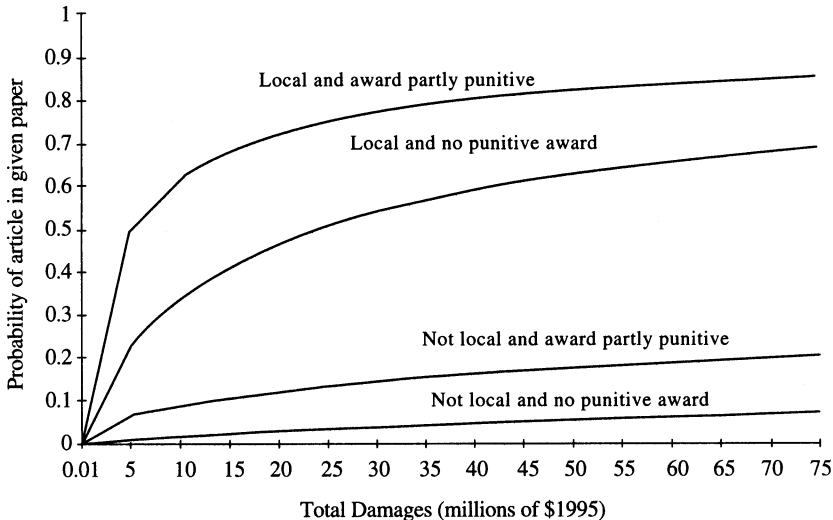

Fig. 2. Local trials with large awards are very likely to be covered, especially if award is partly punitive.

How does the size of the damage award affect the length of an article if one is published? Figure 3, which is set up analogously to Figure 2, summarizes the estimates. As can be seen from the figure, if the story is not local, increases in damages up to about $5 million have an appreciable effect on article lengths,

but there is very little effect of larger damages beyond that level. Moreover, the existence of a punitive component has a very modest effect on article lengths if the story is not local.
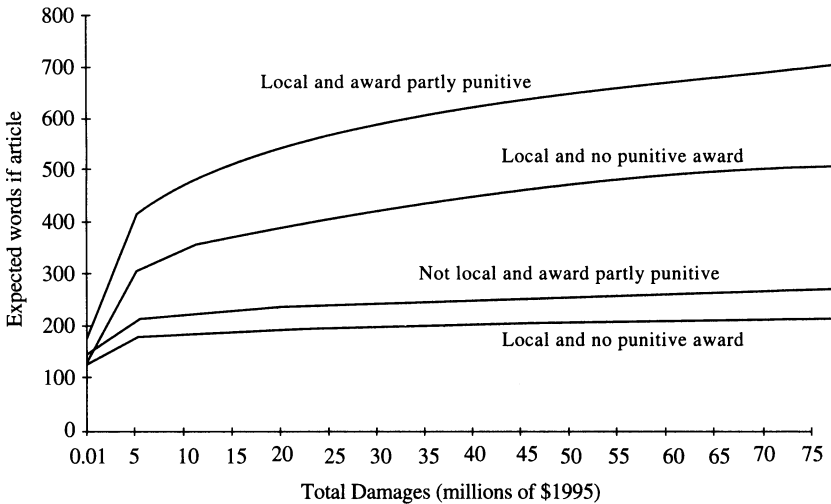

Fig. 3. Expected length of article—if there is one—is much more sensitive to dollar amount and punitive component for local stories.

If the story is local, however, the estimated effects of damage magnitudes and the existence of punitive damages are much more considerable. For example, if the verdict is local, increasing damages from $5 million to $45 million increases the expected number of words from about 320 to 480 if there are no punitive damages and from about 430 to 670 if there are punitive damages.

Sensitivity of Conclusions to Selected Specification Changes

Are the basic conclusions discussed above largely robust to changes in the regression specification? Here we briefly examine this question. Table 6 focuses on the dichotomous dependent variable and reports estimated coefficients for the independent variables that the estimates in Table 6 point to as the key determinants of the extent of newspaper coverage.

For purposes of comparison, the first column of the table reproduces the key estimates from column (1) of Table 4. The next three columns of Table 6 report corresponding estimates based on three different changes in the basic specification: (a) controlling for differences across newspapers with dummy variables (fixed effects) rather than using LNBUS and LNARTS;[76] (b)

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[76] These estimates delete the sample observations for seven newspapers for which we found no relevant articles (thus, for which ANYART always equals zero in the sample).

Table 6. Sensitivity of Key Conclusions to Specification Changes (*t*–Ratios in Parentheses)

	y = ANYART						
Independent Variables	Basic Specification (1)		Fixed Effects for Newspspers[a] (2)		Dollars Are Plaintiff's Award[b] (3)		Dollars in Levels[c] (4)
LNTOT$	.232	(3.65)	.270	(3.94)	.243	(4.02)	.00465	(2.17)
ML$VDT	.509	(1.90)	.492	(1.74)	.464	(1.76)	1.20	(5.42)
METRO	−2.38	(−1.01)	−2.54	(−0.99)	−2.10	(−0.91)	1.22	(5.31)
LCLTOT	.254	(1.65)	.274	(1.63)	.237	(1.56)	.0268	(1.43)
PUNID	.762	(5.01)	.796	(4.94)	.725	(4.81)	.920	(5.96)
RLTRCL	.560	(3.47)	.715	(4.01)	.577	(3.59)	.485	(3.17)
FATAL	.527	(2.91)	.682	(3.47)	.524	(2.91)	.645	(3.67)
LNFMSZ	−0.204	(−4.02)	−0.221	(−4.06)	−0.196	(−3.90)	−0.188	(−3.70)
LNBUS	.0751	(1.27)		[d]	.0749	(1.27)	.0736	(1.26)
LNARTS	.540	(4.32)		[d]	.541	(4.32)	.531	(4.27)

[a] Newspapers for which ANYART = 0 for all observations deleted from sample.
[b] Dollar amounts exclude amounts apportioned to the plaintiff (LNTOT$ and LCLTOT recalculated accordingly).
[c] LNTOT$ and LCLTOT recomputed using levels of real dollar total damages rather than logarithms.
[d] Values omitted because they are constant across verdicts within newspapers and newpaper fixed effects are included.

specifying the dollar amount as the total damages (as used in the basic specification) net of the portion assigned to the plaintiff;[77] and (c) entering dollars linearly rather than in logarithms.[78]

As summarized in Table 6, the key conclusions suggested by the estimates in Table 4 are quite insensitive to these changes in specification. There is only a single change in sign of an estimated coefficient—the positive sign for METRO in column (4)—and this is of no substantive significance.[79] Ignoring for the moment the estimates in column (4) for the three variables involving dollar amounts (in the first, second and fourth rows), changes in the sizes of estimated coefficients and *t*-ratios across specifications are, if anything, surprisingly minor.[80]

Because the specification change in column (4) changes the scaling of LNTOT$ and LCLTOT—and hence changes the units attached to their respective coefficients—it is to be expected that

If these were included in the probit estimation their fixed effects (which would amount to perfect predictors for the relevant observations) would be estimated to be negative and large enough to predict essentially zero probabilities of newspaper coverage. The sample size for the estimates in col. (2) is 3,322.

[77] This adjustment changes the calculation of LNTOT$ and LCLTOT for 11 verdicts where part of the liability was assigned to the plaintiff. The plaintiff share of liability in these cases ranged from .075 to .90.

[78] The logarithm of real total damages is replaced by the level of real total damages and LCLTOT is redefined as the product of the METRO and the level of real total damages.

[79] It merely implies in conjunction with the positive coefficient of LCLTOT that a local story is more likely to be covered no matter how small the damage amount.

[80] For example, almost all of the changes in estimated coefficients are in the second significant digit.

the sizes of the coefficients of these variables would change substantially. The estimated coefficients are of the same signs as their counterparts in other columns, however, and of the same general level of statistical significance.

Before concluding, we return to column (2) to consider an issue addressed by only this specification. In particular, the specification underlying the estimates in column (2), by including indicator variables for individual newspapers, provides direct information about the propensities of different newspapers to report the kinds of verdicts studied here. Perhaps the most interesting papers in this regard are the *Detroit Free Press* (*DFP*) and the *Wall Street Journal* (*WSJ*). The estimates indicate, in fact, that among all sample newspapers the *DFP* has the highest propensity to report verdicts against automobile manufacturers and that the propensity for the *WSJ* is also unusually high.[81]

VI. Conclusions

Effects of the tort system depend on perceptions of various individuals about the frequency, nature and outcomes of lawsuits. The behavior of key actors such as litigants, judges, juries, legislators and business decisionmakers determine diverse legal, social, political and economic outcomes. Mass media coverage of litigation is likely to play a key role in the formation of perceptions that drive this behavior.

The processes by which events within the legal sphere affect social, political and economic outcomes are complex. We have studied a piece of this puzzle: determinants of the amount of newspaper coverage of personal injury, product liability verdicts in automotive cases. Product liability is of considerable interest because business responses to and consequent economic effects of product liability are of major social concern, and (partly as a result) product liability has been the primary focus of federal tort reform efforts. The automobile industry is one of a handful of industries that have figured prominently in debates about economic effects of product liability.

We have examined several issues, most of which have not been previously studied systematically. Among issues that have been studied systematically—by Bailis and MacCoun (1996), who focused on magazines—our results support two key findings: that media coverage tends to focus disproportionately on trials where

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[81] In particular, the *DFP* was chosen as the omitted newspaper, and the estimated fixed effects of all other 51 newspapers are estimated to be negative (indicating less propensity to report than the *DFP*) with 40 of these 51 estimates having *t*-ratios of less than two (greater than 2 in absolute value). The estimated fixed effects for six newspapers (of 50) suggest that they have slightly higher propensities to report than the *WSJ*, but these differences are not statistically significant. (The *WSJ* coefficient is − .55, and the others range from −.53 to −.39; the associated standard errors of these seven coefficients are all roughly .3.)

plaintiffs prevail and where jury awards are larger than is typical of the system in general.[82] Regarding the former, our basic results are very stark. For example, we find almost no coverage of verdicts where defendant manufacturers prevail. Regarding award sizes, we have developed what appear to be the first estimates of the degree to which larger awards increase the extent of coverage.

While we find that larger awards tend to increase newspaper coverage, our interpretation of the data suggests that the extent of this effect is not as large as many would have expected, that there is much to be learned by simultaneously accounting for other potential determinants of newspaper coverage, and that several other factors may be even more important than damage amounts. Such other factors include whether: (a) the newspaper is published in the same metropolitan area as the trial was held; (b) part of the award is punitive; (c) the accident involved one or more fatalities; and (d) the vehicle had previously been recalled for a reason related to a defect alleged in the trial. The presence of any one of these characteristics appreciably increases the likelihood of an article and its expected length, with the first being by far the most important.

The role of the existence of a punitive component of the damage award is of particular interest. While discussions with various observers suggested a widespread belief that there is more coverage of cases involving punitive damages, most of them confidently predicted that this was due largely or entirely to the larger dollar amounts associated with such cases.[83] Our econometric specifications were designed to allow examination of this issue, and the sample involves enough independent variation between award sizes and the existence of a punitive component to allow a fairly confident conclusion: Not only is there a distinct effect of a punitive component—holding total award size and several other factors constant—this component is very substantial. As detailed above, for example, an increase in an award from $5 million to $45 million is predicted to increase the probability of an article in a particular newspaper from 1.5% to: (a) 4.5% if neither award includes a punitive component; but (b) to 18% if the $5 million is entirely compensatory and some or all of the additional $40 million is punitive.

Perhaps effects of assessment of punitive damages—no matter what their amount—on media coverage provide part of the answer to a question often raised in reform debates: If punitive damages are assessed as infrequently as available statistics indi-

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[82] Because we focus on product liability trial verdicts, we cannot address two other key issues studied by Bailis and MacCoun: the extent to which media focus on product liability and malpractice cases and on cases resolved by trials.

[83] As one confident advocate of that view stated: "Reporters don't even know what punitive damages are."

cate, why does the business community care so much about them? Several factors are likely to play a role here, such as unpredictability, financial risk because awards are in principle unlimited, effects of potential punitive damages on settlements, and perceptions of unfairness. In addition, our estimates suggest that punitive damages substantially increase publicity about alleged product defects and alleged corporate misconduct. Such publicity may be viewed by company decisionmakers as very costly because of intangible effects on company reputation or tangible effects on product sales and stock prices, or both.[84] Depending on the perceptions of business decisionmakers about determinants and potential costs of newspaper and other media coverage, the desire to avoid adverse publicity could substantially affect litigation strategy as well as decisions about product design, labeling, manufacturing, and innovative effort.

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[84] Garber and Adams (1999), however, find at most weak evidence of effects of automotive product liability verdicts against manufacturers on subsequent sales of vehicles involved in the trials, and they find no evidence at all of effects of plaintiff or defendant verdicts on company stock prices.

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