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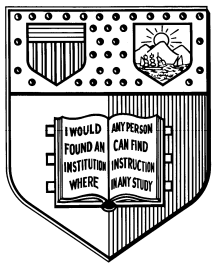

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Abstract

This article assesses the relation between punitive and compensatory damages by combining two data sets of extreme awards with state court data from the National Center for State Courts (NCSC) for 1992, 1996, and 2001. One data set of extreme awards consists of punitive damages awards in excess of $100 million from 1985 through 2003, gathered by Hersch and Viscusi (H-V); the other includes the National Law Journal's (NLJ) annual reports of the 100 largest trial verdicts from 2001 to 2004. The integration of these data sets provides the most comprehensive picture of punitive damages in American civil trials to date. Combining the data sets assists in observing the punitive-compensatory relation throughout the full range of trial awards. The large H-V and NLJ awards appear to fit comfortably within the pattern observed for the broader NCSC data set. We report regression results combining the three data sets, which yield reasonable models of the relation between punitive and compensatory damages. The models indicate that the compensatory award explains more than 50 percent of the variance in the punitive award. We also find no increase in punitive or compensatory awards over time in any of the three data sets.

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The relation between punitive and compensatory awards has long been a prominent policy question. In the last decade the relation has become of constitutional dimension. Two U.S. Supreme Court cases have held that federal due process limitations apply to the relation between punitive and compensatory damages, and invalidated punitive damage awards as unconstitutionally large.[1] While reluctant to impose a bright-line rule for the ratio of compensatory to punitive damages, it held that "courts must ensure that the measure of punishment is both reasonable and proportionate to the amount of harm to the plaintiff and to the general damages recovered."[2] Granted that the factual circumstances and defendant's conduct in some cases might merit a disproportionate award, in general there should be a proportionate relationship between the compensatory and punitive damages awarded to the plaintiff.[3]

Until empirical analyses of the punitive-compensatory relation were published, observers were left to guess about the relation. They apparently did so based on anecdotal evidence and eye-catching awards reported in news headlines. In 1996, the year of *BMW v. Gore*, the first Supreme Court case to invalidate a punitive award on constitutional grounds, a liberal newspaper, *The Washington Post*,

[1] State Farm Mutual Automobile Ins. Co. v. Campbell, 538 U.S. 408, 421 (2003); BMW v. Gore, 517 U.S. 559, 586 (1996).

[2] State Farm Mutual Automobile Ins. Co. v Campbell, at 426.

[3] Id. at 425.

editorialized about the haphazard pattern of punitive awards. The paper, citing no systematic data, had juries pulling "numbers out of the air" in picking punitive awards.[4]

A wave of empirical research in the last decade suggests that the pulling-numbers-out-of-the-air theme finds little empirical support. Multiple studies establish that punitive damages are rarely awarded,[5] are most frequently awarded in cases where intentional misbehavior likely occurred,[6] and bear a rational relation to

[4] "Legislation is needed because punitive damages are wildly unpredictable, so arbitrary as to be unfair and are awarded without any guidance to juries, which simply pick numbers out of the air." Editorial, Trial Lawyers' Triumph, Wash. Post, Mar. 19, 1996, 1996 WL 3069750.

[5] E.g., Thomas A. Eaton et al., Another Brick in the Wall: An Empirical Look at Georgia Tort Litigation in the 1990s, 34 Ga. L. Rev. 1049, 1094 (2000) ("punitive damages currently are not a significant factor in personal injury litigation in Georgia"); Theodore Eisenberg et al., Juries, Judges, and Punitive Damages: An Empirical Study, 87 Cornell L. Rev. 743, 745 (2002) [hereinafter "Juries and Judges"]; Theodore Eisenberg et al., The Predictability of Punitive Damages, 26 J. Legal Stud. 623, 633-37 (1997) (summarizing studies) [hereinafter "Predictability"]; Neil Vidmar & Mary R. Rose, Punitive Damages by Juries in Florida: *In Terrorem* and In Reality, 38 Harv. J. Legis. 487, 487 (2001) ("frequency of punitive damages was strikingly low"); Valerie P. Hans & Stephanie Albertson, Empirical Research and Civil Jury Reform, 78 Notre Dame L. Rev. 1497, 1515-1519 (summarizing studies).

[6] E.g., Eisenberg et al., Juries and Judges, supra note 5, at 745. Punitive damages are most likely to be awarded in cases of slander and libel, intentional torts, and employment disputes. See Hans & Albertson, supra note 5, at 1515-6.

the compensatory damages award.[7] These findings are contested by several researchers, with most of the quantitative research coming from academics funded by Exxon (now ExxonMobil) Corp. in an apparent effort to undermine the $5 billion punitive damages award against it as a result of the *Exxon Valdez* oil spill.[8]

Little disagreement exists about the existence of a strong association between punitive and compensatory awards in the mass of cases. Analysis has shifted from the mass of cases, in which no systematic pathology is found, to a relatively small subset of extreme cases. Two available data sets enable systematic exploration of large awards. First, an academic project growing out of ExxonMobil's research initiative, an article by Joni Hersch and W. Kip Viscusi,[9] reports on a data set

[7] E.g., Catherine M. Sharkey, Dissecting Damages: An Empirical Exploration of Sexual Harassment Awards, 3 J. Empirical Legal Stud. 1 (2006); Theodore Eisenberg & Martin T. Wells, The Significant Association Between Punitive and Compensatory Damages in Blockbuster Cases: A Methodological Primer, 3 J. Empirical Legal Stud. 175 (2006); Theodore Eisenberg, Paula L. Hannaford-Agor, Michael Heise, Neil LaFountain, G. Thomas Munsterman, Brian Ostrom, and Martin T. Wells, Juries, Judges, and Punitive Damages: Empirical Analyses Using the Civil Justice Survey of State Courts 1992, 1996, and 2001 Data, 3 J. Empirical Legal Studies 263 (2006).

[8] Joni Hersch & W. Kip Viscusi, Punitive Damages: How Judges and Juries Perform, 33 J. Legal Stud. 1, 2 (2004) (arguing that juries are more likely to award punitive damages and their awards are larger); Reid Hastie & W. Kip Viscusi, What Juries Can't Do Well: The Jury's Performance as a Risk Manager, 40 Ariz. L. Rev. 901, 916 (1998).

[9] Hersch & Viscusi, supra note 8.

consisting of the largest punitive damages awards. The paper suggests that, in very large cases, jury punitive awards bear no relation to compensatory awards. Second, the *National Law Journal* ("NLJ") made available to us its data on the largest trial awards for 2001 through 2004.

This article combines the H-V data with the NLJ data and with data about the mass of punitive awards in the NCSC data. The combined data sets, the most comprehensive data set on contemporary punitive damages in U.S. courts, yield a highly significant relation between punitive and compensatory awards. Over 50 percent of the variance in punitive awards can be explained by using the compensatory award standing alone. A second major result is the absence of evidence that punitive damages awards have increased over time.

I. The Data Sets

This section briefly describes the data sets used in our analysis. For all three data sets, descriptive and other statistics are available in previous publications.

A. The Hersch-Viscusi Data

H-V analyzed the relation between punitive and compensatory awards in 63 tried cases decided from January 1985 to June 2003. The cases were collected using "a detailed search to identify all cases for which there were punitive damages of at

least $100 million."[10] During the same time period they found three bench trials resulting in a punitive damages award in excess of $100 million. H-V report no meaningful relation between punitive awards and compensatory awards in the same case. "Analysis of these very large awards indicates that they bear no statistical relation to the compensatory awards."[11] That conclusion seems questionable in light of a more rigorous statistical analysis of the H-V data.[12] But the correctness of their analysis is not the question of primary interest here. Rather, it is how the H-V and NLJ data "look" when viewed simultaneously with other data sets of punitive damage awards.

Prior research suggests that the H-V data have both similarities to, and differences from, the mass of punitive awards. Like the NCSC data, the H-V data show a statistically significant association between punitive and compensatory awards. But the association is less strong, and the slope of the best-fitting regression line is noticeably different and flatter than the slope of the line that fits the NCSC data.[13]

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[10] Hersch & Viscusi, supra note 8.

[11] Id. at 2.

[12] Eisenberg & Wells, supra note 7.

[13] Compare Hersch & Viscusi, supra note 8, with Juries and Judges, supra note 5; Eisenberg & Wells, supra note 7.

B . NCSC Data

The *Civil Justice Survey of State Courts*, a project of the NCSC and the Bureau of Justice Statistics, presents data gathered directly from state court clerks' offices on tort, contract, and property cases disposed of by trial in fiscal year 1991-1992 and then calendar years 1996 and 2001.[14] The three separate data sets cover state courts of general jurisdiction in a random sample of 46 of the 75 most populous U.S. counties in the United States.[15] The 75 counties sampled include approximately 33 percent of the 1990 U.S. population; the actual 45 counties contributing data account for approximately 20 percent of the population.[16] The initial data set (1991-

[14] The NCSC is in the process of gathering data for 2005.

[15] The 2001 data included 46 counties; the 1991-92 and 1996 data included 45. One county included in the 1991-1992 and 1996 study, Norfolk, Massachusetts, fell out the nation's 75 most populous in the 2000 census and was replaced by Mecklenburg County, North Carolina, and El Paso County, Texas. Two Maryland counties declined to participate in the 1991-92 study, and were replaced with Fairfax County for all three iterations of the Civil Justice Survey.

[16] For a summary of the data and methodology, see Bureau of Justice Statistics Bulletin: Civil Justice Survey of State Courts, 2001: Civil Trial Cases and Verdicts in Large Counties, 2001 (April 2004) [hereinafter "BJS, 2001"]; Bureau of Justice Statistics Bulletin: Civil Justice Survey of State Courts, 1996: Civil Trial Cases and Verdicts in Large Counties (1996)[hereinafter "BJS, 1996"]; Bureau of Justice Statistics Bulletin: Civil Justice Survey of State Courts, 1992: Tort Cases in Large Counties 6 (1995) [hereinafter "BJS, 1992"]. See also Hersch & Viscusi, supra note 7, at 10-13 (describing 1996 data); Juries & Judges, supra note 5 (describing 1996 data); Michael Heise, Justice Delayed?: An Empirical Analysis of Civil Case Disposition Time, 50 Case Western Res. Univ. L. Rev. 813, 822-27

92) includes only jury trials. The two subsequent data sets, 1996 and 2001, include jury and bench trials. The three NCSC data sets include all completed trials in all three years in most of the counties. Sampling in the 1992 and 1996 data sets is described in earlier publications. Sampling was used in three counties in the 2001 data set, Cook County, Illinois, Philadelphia County, and Bergen County, New Jersey.

These data are the most representative sample of state court trials in the United States. With direct access to state court clerks' offices, as well as approximately 100 trained coders recording data, the information gathered does not rely on litigants or third parties to report.

C. NLJ Data

The NLJ data set consists of what the NLJ has found to be the largest total (punitive plus compensatory awards) jury trial awards in the years 2001 through 2004. One hundred of those largest awards contain a punitive damages component and a non-punitive damages component. For these 100 cases, as for the 63 H-V cases, and the 551 NCSC cases, one can explore the relation between the punitive and the compensatory award. Detailed discussion of the NLJ data appears in the NLJ articles reporting on their data. Like the H-V data, the NLJ data do not account for post-verdict adjustments to awards. The NCSC data report the judgment as

(2000) (describing 1992 data).

entered, which may reflect a judicial reduction of a jury award.

To our knowledge, no systematic analysis of the NLJ data for the relation between punitive and compensatory awards has been published. In results not reported here, we analyzed each of the four years of NLJ data. For three of the four years, we found no statistically significant positive relation between punitive and compensatory awards. For 2004, there was a marginally significant association.

II. Combining Extreme Data with the Mass of Awards

Studying large awards in isolation naturally distorts the picture of punitive damages awards. As seductive as extreme awards are, they are, by their nature, atypical. It is instructive to try and place them in context by combining them with other data relating to punitive damages. This section first explores the punitive-compensatory relation using the three data sets. It then explores time trends in punitive and compensatory awards using the data sets.

A. The Punitive-Compensatory Relation

Figure 1 is a scatterplot of the combined data sets, after removing duplicates of the thirteen cases that appeared in more than one data set. It suggests that the basic punitive-compensatory relation holds throughout the range of punitive and compensatory awards. And the absence of cases from the upper left quadrant of the figure suggests that large punitive awards are almost never given for relatively small

compensatory awards. No million-dollar punitive award (10^6 in logs on the figure's y-axis) appears for any compensatory award of less than $100,000 ($10^5$ in logs on the figure's x-axis).

[figure 1 here]

But the figure also suggests some differences in the three data sets. The NCSC data, represented by circles, have the strongest association between punitive and compensatory awards. The H-V data, designated by triangles, have a weaker but observable positive association between punitive and compensatory awards, as reported elsewhere.[17] The NLJ data (represented by squares), as their separate analysis suggests, show little relation between the punitive and compensatory award.

Together the data sets suggest a "flattening out" of the punitive-compensatory relation as one moves from the mass of NCSC data to the more extreme NLJ and H-V data sets. As compensatory awards become very high, the amount awarded per unit of compensatory damages can decrease without substantially diluting the intended punishment.

The "flattening" of punitive damages at the top end of the compensatory award distribution is accompanied by a nonlinear relation at the low end of the compensatory award distribution. These two flattenings suggest fitting a cubic

[17] That analysis depends on including a dummy variable for tobacco cases, a refinement not needed for purposes of this article.

model that includes compensatory awards (log10) squared and cubed as explanatory variables. The curved line shown in Figure 1 is the best fitting robust regression cubic model using only three compensatory award variables (linear, squared, cubed) as explanatory variables. The cubic model provides a reasonably good visual fit to the data. And cubic models, not reported here, in fact slightly improve on the linear models reported below. The utility of cubic models in fitting these data sets is consistent with cubic models fitting the 1992 and 1996 NCSC data.[18]

Combining the data sets generates new methodological issues, some of which can be addressed and some of which cannot. Since neither the H-V data nor the NLJ data include post-verdict reductions in awards, one should expect them to be more extreme. We lack the data to adjust for this difference from the NCSC data.

We can adjust for another key difference among the data sets. The H-V data span 19 years, the NLJ data span four years, and the NCSC data span three years. In addition, both the H-V and the NLJ data sets purport to cover the entire country. The BJS estimates that about half of all tort cases are handled in the 75 largest counties.[19] Since the actual BJS samples include only 45 of the 75 largest counties, one can estimate the fraction of tort litigation in the 45 sampled counties to be 45/75 times 50

[18] Theodore Eisenberg & Martin T. Wells, The Predictability of Punitive Damages Awards in Published Opinions, the Impact of *BMW v. Gore* on Punitive Damages Awards, and Forecasting Which Punitive Awards Will Be Reduced, 7 Supreme Ct. Econ. Rev. 59, 81 (1999).

[19] BJS, 1992; BJS, 1996; BJS, 2001, supra note 16.

percent, or about 27.8%. Thus, while the NLJ data attempt to account for all the largest cases in four years, and the H-V data account for all the very largest cases for 19 years, the NCSC data account for about 27.8% of the mass of cases decided in three years. The combined sample thus overrepresents the largest awards relative to the mass of awards. Large cases are more likely to be in our combined sample than are more routine cases. By weighting the data based on the estimated probability of a case being in the sample we can adjust for the unbalanced sample design.

Table 1 reports the results. Models (1) and (3) include only the compensatory award (log) as an explanatory variables. Models (2) and (4) include both the compensatory award (log) and dummy variables for the data sets as the explanatory variables. The NCSC data serve as the reference category. Model (5) adds a tobacco dummy variable for cases involving tobacco company defendants. The first two models do not adjust for the oversampling of large awards. Models (3), (4), and (5) use weighted regressions to account for the oversampling. Model (6) examines the ratio of punitive to compensatory awards (logs) as a function of the sources of the data.

Table 1. Regression Models of Combined Punitive Damages Data Sets

	(1)	(2)	(3)	(4)	(5)	(6)
	Unweighted models		Models weighted to reflect oversampling of large-award cases			
	Dependent variable = punitive damages (log10) $2004					Dependent variable = ratio of logs
Compensatory (log10) $2004	1.062**	0.689**	0.874**	0.779**	0.779**	-
	(34.43)	(16.65)	(22.51)	(17.70)	(17.69)	-
NLJ dummy	-	1.360**	-	1.161**	1.160**	0.105**
	-	(9.51)	-	(7.87)	(7.86)	(5.19)
H-V dummy	-	2.183**	-	1.966**	1.832**	0.210**
	-	(14.68)	-	(13.03)	(13.72)	(9.41)
Tobacco case dummy	-		-	-	1.652*	
	-		-	-	(2.51)	
Constant	-0.377*	1.313**	0.424*	0.861**	0.860**	0.964**
	(2.18)	(6.25)	(2.06)	(3.83)	(3.82)	(92.69)
Observations	683	683	683	683	683	683
R-squared	0.68	0.77	0.55	0.59	0.59	0.01
Robust t statistics in parentheses						
+ significant at 10%; * significant at 5%; ** significant at 1%						

The table contains two major findings. First, consistent with other studies of more limited data sets, the punitive award is highly correlated with the compensatory award. In all four models, the coefficient for the compensatory damages explanatory variable is statistically significant beyond any reasonable threshold. Second, the models have substantial explanatory power. All explain more than half the variation in the punitive award.

Table 1 also suggests the importance of accounting for the unbalanced sample structure. The unweighted results in models (1) and (2) convey an exaggerated picture of the models' explanatory power of the punitive award. Models (3), (4), and (5) provide a more realistic estimate of the amount of variation in the punitive award that the compensatory award helps to explain. Regression diagnostics also suggest the superiority of the weighted models. Both residual versus fitted plots and inspection of the distribution of the regression residuals are more satisfactory for the weighted models than for the unweighted models.

Table 1 also shows statistically significant, positive coefficients for the H-V and NLJ dummy variables. Model (6) confirms this effect even when the dependent variable is changed to the ratio of punitive to compensatory awards. Thus, per unit of compensatory damages, cases in the H-V and NLJ data sets tend to have higher punitive awards. This likely is due in part to the mechanism for being selected into the H-V or NLJ samples. Observations cannot enter the H-V sample unless they have at least a $100 million punitive award. Thus, one expects these cases to have

larger punitive awards per unit of compensatory award than cases from a broader cross-section of awards. The NLJ data are selected for the overall size, but not necessarily the size of their punitive damages awards. Note that the coefficient for the NLJ dummy variables is noticeably smaller than that for the H-V dummy variable. This likely reflects the less direct focus on punitive damages in choosing cases for the NLJ stories.

B. Time Trends

All three data sets span multiple (albeit different) years. Given often expressed concerns about time trends in award sizes, the three data sets allow exploration of time trends in punitive and compensatory awards. Figure 2 shows the mean punitive and compensatory award for each data set for each year covered by the data set, from1985 to 2004. The figure suggests no noticeable increase over time for either compensatory or punitive awards for any of the three data sets. This result is consistent with other recent evidence that perceptions of broad-based increases in recoveries,[20] fee awards,[21] and tort awards are not well supported by evidence.[22]

[20] Theodore Eisenberg & Geoffrey Miller, Attorney Fees in Class Action Settlements: An Empirical Study, 1 J. Empirical Legal Stud. 27 (2004).

[21] Id.

[22] Seth A. Seabury, Nicholas Pace, and Robert Reville, Forty Years of Civil Jury Verdicts, 1 J. Empirical Legal Stud. 1 (2004).

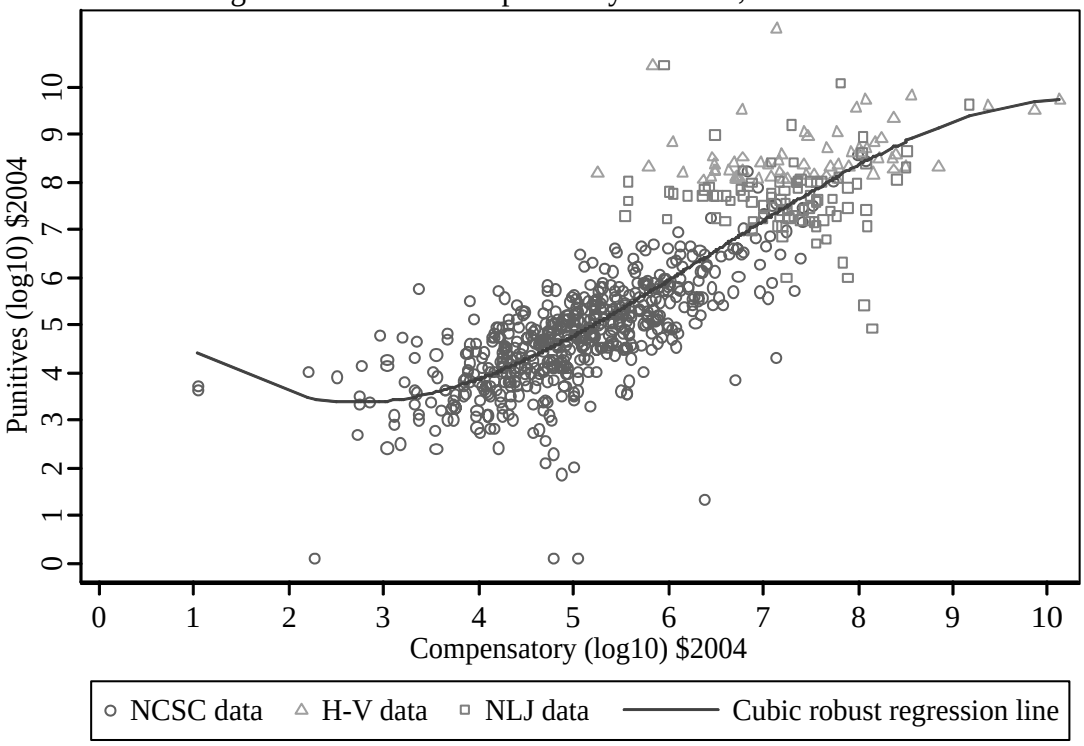
The two datasets comprised of extreme awards, and one comprised of the mass of awards, show no time trend.

[figure 2 here]

III. Conclusion

Data about the largest punitive damages awards allow estimation of the relation between punitive and compensatory awards for both the mass of cases and for the most extreme cases. Throughout a substantial range of awards, a strong, significant correlation exists between punitive awards and compensatory awards in the same case. We also find no evidence of increased awards over the time period of 1985 to 2004, either in run-of-the-mill punitive awards or in blockbuster awards.

Figure 1. Punitive-Compensatory Relation, Three Data Sets



Sources: Hersch-Viscusi, 1985-2003; NCSC, 1992, 1996, 2001; NLJ top 100 awards, 2001-2004

Figure 2. Time Trends in Punitive & Compensatory Awards, Three Data Sets