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MEASURING THE DURATION OF JUDICIAL AND ADMINISTRATIVE PROCEEDINGS: A COMMENT

David P. Doane*

Professors Clark and Merryman propose a useful indirect measure of the duration of litigation whose primary virtue is its ease of computation from published court data. As the authors note, such a measure of duration may be useful to persons involved in judicial administration and to attorneys formulating strategy in litigation,¹ and the legal community should find informative their illustration of the concept with Italian court data. Concluding on a pragmatic note, Professors Clark and Merryman appear to suggest that attorneys, clients, judges, court administrators, and social scientists must ultimately assess the utility of their concept.² In making this assessment, we ought to consider several aspects of their proposal, including some underlying practical and theoretical problems. Several of the appropriate caveats apply to all statistical research, while others are directed specifically to their concept of the duration of litigation (D).³

There is no question that most court statistics published in this country are inadequate. The picture, however, is not as bleak as Professors Clark and Merryman seem to suggest.⁴ Researchers do have access to fairly accurate data without archival research in a growing number of jurisdictions. The federal courts, for example, have for years published estimates of the duration of litigation, including median and mean statistics, broken down according to the type of case, the circuit, and even the district.⁵ Also available are the "federal case weights,"⁶ compiled since 1964, which estimate the average number of judge-hours required to dispose of particular

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1. See Clark & Merryman, *Measuring the Duration of Judicial and Administrative Proceedings*, 75 MICH. L. REV. 89, 89-90 & nn.1 & 2 (1976).

2. See *id.* at 99.

3. The variable D will be used specifically in reference to the measure of duration proposed by Professors Clark and Merryman. See *id.* at 92-95.

4. See *id.* at 91-92 nn.10-11.

5. These statistics have been available since the late 1960s. See U.S. ADMINISTRATIVE OFFICE OF THE U.S. COURTS, ANNUAL REPORT OF THE DIRECTOR 245i-245n, 246-84 (1970). A graphic example of the rapidity of the changes in statistical availability can be obtained by comparing the 1970 and 1973 Annual Reports.

6. See FEDERAL JUDICIAL CENTER, 1969-1970 FEDERAL DISTRICT COURT TIME STUDY 31 (1971).

types of cases. Of course, the federal system has been at the forefront both in the development of statistical reporting systems and centralized administrative planning, two goals which have so far eluded most state and municipal court systems. In fact, it is probably fair to say that the federal judicial system is about ten years ahead of the average state court system in statistical sophistication.⁷ The federal system's successful application of this statistical information to a variety of tasks, however, has undoubtedly served as a powerful incentive for state and local courts to push for similar statistical capabilities.

As Professors Clark and Merryman note,⁸ California, Maryland, New Jersey, New York and a part of Pennsylvania publish mean or median statistics for the duration of litigation. To this list we may at least add Illinois, Michigan, and Utah, which according to the National Center for State Courts (Center), also compile and publish such statistics.⁹ Significantly, these states together include approximately one third of the population of the United States. Further, at least twenty-five to thirty states regularly submit annual reports to the Center that include statistics comparable to those compiled by Professors Clark and Merryman for Italian courts.¹⁰ An indirect measure of the duration of litigation may be derived from this data. It is considerably more difficult to determine the statistical sophistication of the local court systems. However, the District of Columbia, New York City, Los Angeles, and other California cities publish mean and median statistics that, if not superior, are at least comparable in sophistication to those statistics of the more advanced states.

Standardized statistical reporting must be a first priority for state and local judicial systems since it is a *sine qua non* for modernization. In addition, since the cost effectiveness of such reporting systems has been widely demonstrated, it is reasonable to predict that within a few years all but the smallest courts will be able to afford to publish high-quality statistics. The national Center for State Courts and the Law Enforcement Assistance Administration (LEAA) are now sponsoring projects to speed the modernization of information systems and to improve comparability of statistics among jurisdictions:

7. See, e.g., U.S. ADMINISTRATIVE OFFICE OF THE U.S. COURTS, *supra* note 1; U.S. ADMINISTRATIVE OFFICE OF THE U.S. COURTS, *MANAGEMENT STATISTICS FOR UNITED STATES COURTS* (1973).

8. See Clark & Merryman, *supra* note 1, at 92 n.10.

9. See Court Case Weights Using the Delphi Method: Report on an Experiment in the Michigan Circuit Courts, paper presented by D. Doane at Joint National Meeting, Operations Research Society of America and The Institute of Management Sciences, Nov. 3, 1976, Miami Beach, Fla. [hereinafter Doane Paper] on file at *Michigan Law Review*.

10. See *id.*

Of greater potential for the courts themselves, though its fruition is likely ten years away, is LEAA's Standard Judicial Information System Project. With [pilot projects] now operating in eleven states, [this project] is a truly major effort to develop the basic information systems needed for court management at the state level. Changing technology . . . makes possible the development of similar decentralized but compatible systems even in small courts.¹¹

Thus, the inadequacy of most state and local court statistics is a diminishing, if still troublesome, problem.

If, however, published data in a particular jurisdiction do not include direct measures of duration of litigation, it is necessary to use an indirect measure. Before adopting any particular estimate of the duration of litigation, such as the equation for index D offered by Professors Clark and Merryman, it is helpful to recognize the limits of its statistical validity and its proper applications. For instance, the index D is a proxy variable whose theoretical properties are uncertain. It should not be regarded as a substitute for a mean or median statistic, since it does not closely resemble either one. It is correct, as Professor Clark and Merryman claim,¹² that D will probably more closely approximate the mean than the median. Even a high correlation between D and the median duration, however, does not establish that D is a "good" alternative, except in the limited sense that both measures tend to vary in the same direction. Moreover, a high degree of correlation ($R^2 = 0.54$)¹³ does not necessarily have much practical significance to an individual litigant. The attempt to relate D to the mean or median seems to be a digression from the main argument. It is sufficient to say that D is simply one possible "measure of central tendency,"¹⁴ and then to identify its more important features, including its limitations.

It is first important to recognize that D is really just the ratio of ending inventory to withdrawn and adjudicated cases. It is not an annual input-output ratio as Professors Clark and Merryman claim, but rather a stock-flow ratio. Roughly speaking, D is the inverse of what accountants call the "inventory turnover ratio," a widely used management tool.¹⁵ This fact may help some readers recognize the essential simplicity and possible uses of D statistics.

Second, D is unable to offer a good measure of a court's *capacity* to deliver judgments, assumed to be equivalent to the number of trials.

11. NATIONAL CENTER FOR STATE COURTS, ANNUAL REPORT 9 (1975).

12. See Clark & Merryman, *supra* note 1, at 95 n.18.

13. *Id.*

14. A measure of central tendency is a statistic that reduces a large body of data to a single term, such as a mean, median, or mode.

15. See G. WELSCH, C. ZLATKOVITCH & J. WHITE, INTERMEDIATE ACCOUNTING 1046 (1972).

This criticism focuses on the use of D as a measure of the efficiency of a court. Illustratively, suppose that during a given year 500 final judgments have been rendered (J) and 500 cases have been withdrawn (W), and that at the end of the year 1,000 cases are pending. Since

$$D = \frac{P_{t+1}}{J+W}$$

we find that by plugging in our illustrative statistics,

$$D = \frac{1,000}{500 + 500} = 1$$

which Professors Clark and Merryman interpret to mean that, on the average, it will take one year to decide a newly filed case in the subsequent year. However, given our court's illustrative work rate and assuming cases are decided in order of filing, *if* all cases were actually brought to trial it would, in fact, take two years for the court to work its way down the queue to a newly filed case. The *capacity* of our court to adjudicate cases, therefore, is better reflected by DonVito's index¹⁶

$$D = \frac{P}{J} = \frac{1,000}{500} = 2$$

Third, the D index probably would not be helpful in assigning cases and staffing courts and administrative tribunals. The primary virtue of the D statistic is its ease of computation. However, the proper allocation of judicial resources requires a more specialized statistical tool, and the most promising developments in this area involve refinements of the case-weight statistics already fashioned for the federal courts.¹⁷ Case weights are designed to reflect the resource demands imposed by different types of cases. An index of duration is but one measure of the demands. The issues now being discussed in connection with case-weight estimation have revealed many difficulties that prohibit the cavalier use of an indirect measure of duration to allocate judicial resources.¹⁸

16. See DonVito, *An Experiment in the Use of Court Statistics*, 56 JUD. 56 (1972). The individual litigant, however, is not interested solely in the court's capacity to render judgments. The number of cases withdrawn has an important

effect on his behavior. Thus, for *his purposes* the formula $\frac{P_t}{J+W}$ may be superior

to DonVito's $\frac{P_t}{J}$.

17. See text at note 6 *supra*.

18. See Doane Paper, *supra* note 9.

Finally, a potential problem exists in determining what judicial action ought to be considered a separate "case" for purposes of measurement. This is important since the definition of a case, which underlies the measurement of all the variables in the equation for *D*, appears to vary among jurisdictions. For example, some courts may count litigation involving multiple defendants as several cases, equating the number of cases with the number of codefendants in the complaint. This practice is generally at odds with the standard accounting practice, but it illustrates the potential for disparity. Similarly, some courts count as separate cases court actions that follow up previously tried cases, such as those to enforce judgments or determine probation violations, and those involving matters on remand from appellate courts, while other court systems do not.¹⁹ The importance of this can be understood by considering equation (5) proposed by Professors Clark and Merryman.²⁰ Assuming this ratio is less than one, if a jurisdiction adopts a liberal definition of what action is a "case," its *D* index would be larger than if the *same* jurisdiction more conservatively counted cases. A similar result would follow if two different jurisdictions adopted different accounting definitions. Thus, *D* has only limited validity for comparisons among jurisdictions until statistical reporting is standardized.

One general word of warning must be voiced regarding the general limitations of statistical methods. Professors Clark and Merryman imply that in order to predict we must reduce data to a single, summary term, such as the mean, median, or modal duration.²¹ It is true that one of the statistician's duties is to collapse unwieldy arrays of observed data into a single statistic to comprehend more easily properties of the phenomenon under observation. There are, however, two reasons why information reduction alone does not permit us to predict accurately an *individual event*.

The first reason is that the next case to be filed must be assumed to be as variable as the original array of observations. There can be no appeal to the law of large numbers when dealing with a single case. Almost by definition, statistical averages should only be used for broad scale planning since the power of statistics lies more in identifying general characteristics than in predicting specific events.

The second reason is best considered by reference to an illustration. Let us consider, for example, two courts, A and B, whose distributions of case processing times for the same types of cases vary

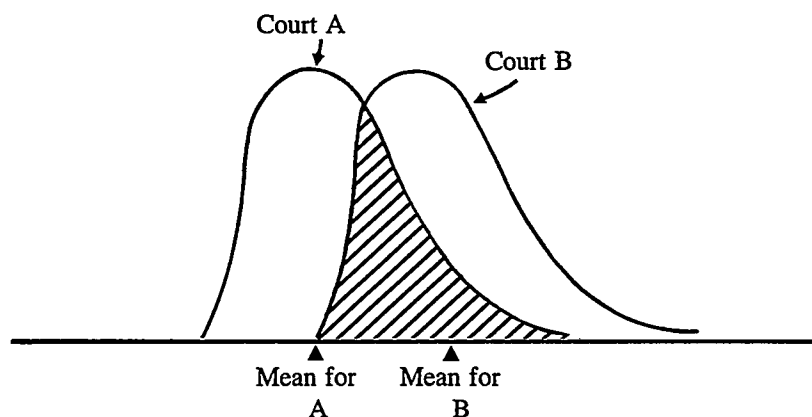
19. *See id.*

20. *See* Clark & Merryman, *supra* note 1, at 94.

21. *Id.* at 92.

as shown in Figure 1 and are skewed to the right as Professors Clark and Merryman suggest.²²

FIGURE 1



Key: lower axis measures duration of litigation and shaded area represents extent of overlap

The mean duration for court B exceeds that for court A, but since the variations in time for the two courts are so large, the distributions overlap to a significant degree. In other words, the observed difference in means, although statistically significant, may have little practical significance for litigants making short-run, individual decisions. Practitioners will perhaps find it easy to accept the a priori argument that the variation in time is indeed large.

As a final consideration, it is clear that the average duration of litigation is partly a result of conscious strategic actions by attorneys and other decision-makers. It is too simplistic to assume that time impinges only as an exogenous constraint in the model of litigant decision-making. Much work remains if we are to construct new theoretical formulations of behavior that are both logically and empirically appropriate for application. Despite the pragmatic nature of their article, Professors Clark and Merryman do their part to identify relevant underlying issues. This is a characteristic of good empirical research: It brings trouble spots into sharp focus and swells the queue of unanswered theoretical questions. Professors Clark and Merryman have taken an important step in formulating a basic vocabulary of working concepts and indicators to be used by researchers. The next steps belong to the model builders.²³

22. *Id.* at 95 n.18.

23. The best behavioral modeling may be found in the utility-maximization approach, see Landes, *An Economic Analysis of the Courts*, 14 *J. LAW & ECON.* 61 (1971), and the systems-descriptive Markov models. See Blumstein, *Management Science to Aid the Manager*, 15 *SLOAN MANAGEMENT REVIEW* 35 (Fall, 1973).