presented by statistics." This is an hypothesis with merit, but one that presupposes the conclusiveness of statistical evidence. Having worked on a number of legal cases involving employment discrimination, I can see several reasons why other aspects of the case may outweigh the statistical evidence.

First, the nature of statistical evidence is largely supportive in legal cases and helps the judge frame a picture of the total evidence. Court opinions hinge on many considerations, including the judge, expertise of the attorneys, testimony of witnesses, documentation of employee policies and numerous legal restrictions, that may override statistical conclusions. I know of at least two cases where fraud and lack of disclosure were dominant concerns and outweighed all other evidence, including the statistical results.

A second reason concerns the adversarial nature of legal proceedings, which often creates tensions and may interfere with statistical conclusions. The court's objective is to get at the truth; but the issues are complex, time is limited and legal matters often restrict the analysis. The statistical conclusions from the opposing sides may be incomplete, exposing two different viewpoints of the data, rather than a more general consensus embracing both. Commenting on truncation bias effects on salary regressions in *Vuyanich v. Republic National Bank* (1981, p. 199), Judge Higginbotham remarked, "Because the controversy here appears to center on an issue on the frontier of econometrics, and there seems, at least to a court unschooled in the intricacies of econometrics, to be genuine conflict between the experts as to the proper approach, we do not decide the issue."

Some attorneys adopt a strategy where the opposing statistical experts simply "cancel each other out." Although this may be appropriate for the legal case, it hardly advances our scientific knowledge about the employment process. But it is a reality of litigation and one that confronts statistical experts for both plaintiffs and defendants.

Finally, there are formidable difficulties in statistical assessments of discrimination from employment data. We do not have a well-developed economic model of the employment process that yields definitive measures of discriminatory departures. Bloom and Killingsworth (1982), Ehrenberg and Smith (1985) and Cain (1986) document the current level of knowledge and evolving economic theory. The intent of Title VII has been to prevent unequal treatment of individuals but also not to infringe on differential employment decisions that arise from job relatedness or "business necessity" (Fiss, 1979). What constitutes "business necessity" is not a simple matter and varies considerably across different organizations. The most recent legislation for the 1991 Civil Rights Act affirmed the importance of "business necessity," while deliberately leaving it vaguely defined and for individual cases to decide.

There is a great need for a well-developed model of the employment process and accurate measures of relevant income, job qualifications and market-related factors. Although we have made substantial progress, the appropriate models and data bases are still evolving. The work to improve inadequate data sources is hardly glamorous and requires painstaking effort. Nonetheless, only with accurate data bases and more complete structural models of the employment process can we hope to achieve better statistical measures of discrimination. In the meantime, we must strive to maintain scientific objectivity and a balanced viewpoint, summarizing the data as best we can and acknowledging areas of uncertainty, to promote informed policy decisions.

ACKNOWLEDGMENTS

This work was partially supported by the School of Business Administration Research Fund, University of Southern California. The author would like to thank Lou Gordon and Ingram Olkin for helpful conversations and suggestions.

Comment

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Because of the author's dual qualifications as a lawyer and statistician, it was interesting to observe that two themes of the article were the view that statistical studies are used to bolster decisions that the policymaker or judge was leaning to anyway and the reluctance of judges to rely solely on statistics. After first commenting on these and other general issues raised by Professor Gray, I will then discuss the regression analyses used in some of the cases cited. As I previously participated in the discussion of Professor

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